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ABSTRACT

This final report describes activities and accomplishments of an outreach project of Project SKI-HI, a family-centered, home intervention model designed to provide training to early intervention professionals serving infants, toddlers, and preschoolers with hearing impairments. In the project, an early intervention professional or a parent advisor makes weekly home visits to families that have an infant, toddler, or preschooler with a hearing impairment and writes and reviews the Individualized Family Service Plan or Individualized Educational Program. The goals of the project are outlined and include: providing a complete delivery system of family-centered intervention; utilizing an innovative awareness and training approach to meet the changing audiences of direct service providers; developing materials which support early interventionists; providing training for local project trainers to enable them to train new professionals; and developing/implementing a system of technical assistance to sites. Individual sections of the report address the project's objectives and activities, conceptual framework, model, replication sites, dissemination activities, training activities, methodological/logistical problems and their resolutions, impact, and future activities. Extensive appendices include a sample newsletter, a SKI-HI training format overview, tables of contents of various SKI-HI publications, and a data report. (Contains 23 references.) (CR)

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FINAL REPORT
to

U.S. Department of Education
Office of Special Education Programs
Early Education Program for Children with Disabilities--Outreach Projects for Young Children with Disabilities

CFDA 84.024D

by Project SKI-HI

Comprehensive Training of Personnel
and
Technical Assistance in Establishment
of
Home Intervention Programs For Families of Infants Toddlers and Preschool Aged Children With Hearing Impairment

Award #H024D20022

SKI-HI Institute
Department of Communicative Disorders
Utah State University
Logan, Utah 84322-1900

July 31, 1996

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II. Abstract

**Comprehensive Training of Personnel
And Technical Assistance in Establishment Of
Home Intervention Programs For Families Of
Infants, Toddlers, and Preschool Aged Children With Hearing Impairment**

Project SKI-HI Outreach

Don Barringer, Director — Dorothy Johnson, Outreach Coordinator

Project SKI-HI is a family-centered, home intervention model, designed to provide early intervention/childhood professionals serving infants, toddlers, and preschoolers, ages birth to five, with hearing impairment with the training needed to better serve these young children and their families. Project SKI-HI was originally developed as a U.S. Office of Special Education Early Education demonstration model and was first certified by the National Diffusion Network through the Joint Dissemination Review Panel (JDRP) in 1978, was recertified in 1984, and awarded the latest Program Effectiveness Panel (PEP) recertification on February 9, 1991.

In the SKI-HI Model, an early intervention professional, or parent advisor, goes to the home weekly to work with the family of a child who has hearing impairment. The parent advisor uses both their training in the SKI-HI model and the SKI-HI Resource Manual as guides in working with these children and families. Under this system, the parents and parent advisor work as team members with other appropriate professional personnel in determining goals, writing/reviewing the Individualized Family Service Plan (IFSP) or Individualized Educational Program (IEP), carrying out and monitoring activities, and preparing for transition to school programs.

The goals and activities of the SKI-HI Outreach project focused on: meeting the unique developmental needs of very young children who are hearing impaired, providing a complete delivery system of family centered intervention for infants, toddlers, and preschoolers who are hearing impaired and their families, utilizing an innovative awareness and training approach to meet the changing audiences of direct service providers, developing state-of-the art materials which support early interventionists and the families they serve, providing training for local SKI-HI trainers thereby enabling them to provide SKI-HI training to new professionals in programs throughout their state, and developing/implementing a system of providing follow-up and technical assistance to sites.

The population SKI-HI serves continues to grow. Letters of request for services from states and agencies echo this growing need for SKI-HI training, materials, and assistance in developing effective early intervention services for these children and their families. The establishment and continued support of Outreach Services to Provide Comprehensive Training of Personnel and Technical Assistance in the Establishment of Home Intervention Programs for Families of Infants, Toddlers and Preschool Aged Children with Hearing Impairments Families provides a mechanism family service providers and the families they serve can utilize to exchange information and techniques which have been proven to further the development of these children.

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IV. Final Report on Goals, Objectives and Activities of the Project Over the Three Year Grant Period, October 1, 1992 - September 30, 1995, and the Grant Extension Period, October 1, 1995 - May 31, 1996.

Objective #1

To coordinate with statewide lead agencies for Part H and preschool special education coordinators in developing early intervention home-based family centered services for young children with hearing impairment through adoption of the direct service component of the SKI-HI Model.

State lead agencies were contacted at each step of the process of awareness, needs assessment, planning, and training. SKI-HI staff have worked with state coordinators to facilitate the development of systems in the states for continued implementation, including the development of systems which will increase local training capacity and the flow of critical information to facilitate long-term continuation of implementation/training activities.

For the grant and grant extension period, systems development for long-term implementation of the SKI-HI Model, through on-site awareness conferences or through dissemination of awareness materials and follow-up activities designed to strengthen and/or encourage the formation of state and/or regional steering/planning committees were conducted in AK, CA, IA (EZone), FL, HI, IL (Ezone), ID, IN, LA, MI (Ezone), NC, NJ, NV, NY, PR, OH, RI (ECommunity), SD, WI, UT, and D.C. Funding from the National Diffusion Network provided additional financial assistance. In addition, a multi-state awareness meeting was held in Utah June 10-12, 1993 for state coordinators from MN, WI, NC, WY, and IN. This provided the SKI-HI Institute with an efficient way of connecting with several states and presenting its programs, while bringing together key people from each of the target states so that they could confer with each other concerning their states' needs and discuss the ways in which SKI-HI could be implemented within their state.

Objective #2

To conduct appropriate awareness and dissemination activities for statewide and local lead agencies needing SKI-HI Outreach services.

To promote widespread awareness of the SKI-HI model, the project disseminated awareness materials, including brochures, training information sheets, newsletters, descriptions and prices of materials. Additionally, three issues of the SKI-HI Institute Newsletter, in which SKI-HI has a prominent part, were printed and distributed each year. Each issue of the newsletter has reached more than 2,000 agencies/individuals. The newsletter includes articles on new projects and products of SKI-HI, the activities of SKI-HI replication sites around the country, SKI-HI training activities, as well as new materials relating to SKI-HI. See Appendix A for a sample newsletter.

SKI-HI promotes public and professional awareness by responding to all requests for information, by speaking at conferences, through phone conferences held with implementation sites, and by disseminating materials nationwide through its network of replication sites. Through this well developed awareness and dissemination program the following were accomplished:

a. Distributed an *awareness brochure* and a 15 minute *awareness video* which stimulated program interest by providing a brief program overview.

b. Shared implementation information in the *Parent Advisor Network* at regional conferences/local meetings. Over the years, the network of SKI-HI part-time and full-time parent advisors (direct service providers) has grown to more than 1,500.

c. Shared information in the *Certified Trainer Network* via newsletters and conferences as well as through Basic Training delivered by National Trainers and by the local training systems firmly established in many states.

d. Produced *SKI-HI materials* through research and product development. Announced availability of these products in the *SKI-HI Institute Newsletter* which reached over 2,000 people, 3 times a year. *SKI-HI products* were made available to the those working in the field and to parents through a distribution company called Home Oriented Program Essentials, INC., (HOPE). Through HOPE INC., parents and professionals could/can access SKI-HI materials at a very reasonable cost.

e. Disseminated Awareness and other Project SKI-HI materials directly to the field through the mail as well as at national, regional, and local conferences and awareness sessions.

f. Presented information about the SKI-HI program, materials, and data at various conferences.

g. Conducted onsite and phone *Awareness Conferences* throughout the grant period (see Objective #1 for a comprehensive list of awareness sites).

Objective #3

To develop and disseminate state-of-the-art instructional, management, testing, and training material to new and ongoing adoption sites.

Project SKI-HI at the SKI-HI Institute has a product development division and a national network of sites for field testing new curriculum programs and materials. The project follows a procedure established at the SKI-HI Institute, which begins with recognizing a need in the field. Based on need, the product is conceived and money is requested in the next budget. A prototype of the materials is developed and tested throughout the SKI-HI network. Revisions are made and a final master is produced. The product is then distributed in the SKI-HI network. This process was used throughout the three years of the project.

Based on need indicated by SKI-HI users, project resources helped to develop the products listed below during the 1992-95 grant period.

1. **Revision of The SKI-HI Model Resource Manual and development of Homestudy materials.**

   The new edition of The SKI-HI Model Resource Manual was completed and ready for distribution in 1993. Companion training materials and overheads to accompany the new manual have been developed and distributed through Trainers' Tidings, the newsletter for all local and national trainers. In addition, a SKI-HI Homestudy course was developed to accompany the newly revised SKI-HI Manual so that training sites can now choose the training format that best suits their programming needs.

2. **Resource materials for parents and professionals.**

A draft of the SKI-HI Parent (Family) Resource Notebook has been completed. Each section of the notebook was read and critiqued by active parent and parent advisor readers across the country. Sections were then edited to reflect the comments of the readers. The completed notebook was then published in draft form and presented to a select group of parent advisors in Utah for field testing. The feedback which the Utah parent advisors will provide in Summer, 1996, will be used to make the final modifications for the resource notebook. The final notebook will be printed and distributed through HOPE, Inc., to parent advisors nationally.

This resource notebook provides families with a child who has hearing impairment with an organized way of keeping and organizing information. It is designed to empower families to become participating members of the early intervention team. See Appendix B for a sample Coversheet and Table of Contents for the Family Resource Notebook. (Note: Translation of the notebook into Spanish will be completed upon receipt of final modifications based on the Utah field test.)

A parent education video on hearing aids, entitled Hearing Aid Management Skills for Families of Young children Who Are Deaf or Hard of Hearing was completed in Summer of 1993. Tapes are now available for distribution.

A video tape entitled Aural-Oral and Sign Options for Hearing Families in Early Home Programming was completed in 1995. It is presently available for distribution.

Two sections of the new Core Resource Manual, Foundations of Partnershipping & Enhancing the Parent/Parent Advisor Partnership have been completed. This manual is a resource for parent advisors and parents of young children with special needs who are working together in early intervention programs.

3. **Training materials, both printed and audio-visual.**

Work was completed on new video clips which have been incorporated into SKI-HI training. These training clips include topics in the following areas: Hearing aid programming, communicative interaction, auditory programming, and language programming.

New instructional and evaluation materials were also developed for training, including an update of trainer guidelines.

4. **Awareness materials.**

The SKI-HI audio-visual overview has been revised to reflect program development. The printed in-depth SKI-HI overview and description of trainers has been updated. In addition, awareness materials designed to fit the needs of specific implementation sites across the nation have been developed and/or adapted for site specific presentations.

5. **Instructional and evaluation materials for training.**

With NEC*TAS assistance, a specialist on adult learning techniques, Larry Edelman, spent time in May 1995 with project staff and reviewed a significant portion of the SKI-HI training materials. As a result of his consultation, SKI-HI training materials underwent a major revision to incorporate more adult learning principles, strategies, and activities. These revised training guidelines, handouts, and transparencies were packaged in notebook form. The availability of the new training materials packet was announced in Trainers' Tidings, the newsletter for all local and national trainers. See Appendix C for a sample Table of Contents from Trainers' Tidings. The new training packages have been distributed to the 7 national trainers, and at the 1996 local SKI-HI trainers' certification workshop in Omaha Nebraska.

Updating of training guidelines, handouts, and overhead transparencies has been an ongoing activity throughout the project. As part of this ongoing revision process SKI-HI national trainers met at Utah State University in January of 1995 to review training materials and provide valuable input for future changes/adaptations in training format and materials.

6. **Disseminate new materials through the SKI-HI network and marketing.**

The availability of the Parent (Family) Resource Notebook will be announced fall, 1996, in the SKI-HI Institute Newsletter and will be made available to the SKI-HI network through HOPE, Inc., a distribution company which markets new products.

The Core Resource Manual, still in process, will be disseminated in modules so users can choose those modules most useful to them. Other materials developed under this grant are currently being disseminated.

Objective #4

To locate potential adoption sites through coordination with statewide agencies and assist new and ongoing SKI-HI programs in linking with state lead agencies and local early intervention/early childhood programs.

The project has developed an innovative statewide/region-wide awareness and dissemination conference process. The project was able to use the resources of State Facilitators and the State Offices of Education and/or Health Special Education Programs to locate the appropriate target agencies and people to disseminate and facilitate the replication process. Through close work with the above facilitators, the project came to understand the needs and goals of states in the area of early intervention, and to help meet those needs. Part H and Section 619 coordinators were essential to this process in that all early intervention efforts *must* be coordinated with them. SKI-HI requested that within the states, these coordinators form an advisory or steering committee to assist in selecting individuals to be trained, determine dates and locations for training, and provide the necessary single coordination point for SKI-HI implementation in their state. This statewide coordination is critical to successful implementation and long term systemic change, a major goal of Project SKI-HI.

The activities associated with site development and replication which were carried out during the project period are listed in sequential order below:

a. Worked with state lead agencies and local agencies to assess needs and the match with SKI-HI.

b. Located potential replication sites. If there was sufficient interest in the SKI-HI Model, the state lead agency or agencies wrote a letter of request for outreach services. The state lead agencies then acted as the coordinators between SKI-HI and local service agencies. Each local agency sent a letter of request indicating (1) the current status of services to children with hearing impairment and their families and the need for SKI-HI, (2) a commitment to using SKI-HI for at least a year after training, (3) an estimate of the number of personnel to be trained, and (4) an estimate of the number of families and children expected to receive SKI-HI services.

c. Selected sites for replication. If the agency met the criteria for replication, the agreement was negotiated. The following selection criteria were used:

1. Personnel have a positive attitude towards replication.
2. Personnel and financial resources will be committed to implement the program.
3. The agency is willing to share in or pay for outreach costs.
4. There is evidence of commitment to continue services after outreach assistance ceases.
5. There is a demonstrated need for the outreach services as evidenced by numbers of unserved or underserved infants, toddlers, and preschool age children who are hearing impaired.
6. Agency personnel have made an official request for outreach services.
7. Agency personnel agree to provide equal access and treatment for all children who are members of groups that have traditionally been underserved, including minority, low-income, and rural families, and to provide culturally competent services in local areas.
8. The replication conforms to the state's plan for early intervention and preschool and related services and the state lead agency is aware of or coordinating the replication activities.

d. Coordinated with and provided information to state lead agency and local agency administrators and supervisors for program development. When a new agency made a commitment to replicating SKI-HI, the SKI-HI project worked with the agency's staff to ensure optimal development of the program. SKI-HI provided guidelines in development of the program, recruiting personnel, deciding who should attend training, and coordinating SKI-HI implementation with states' fulfillment of the IDEA.

   The SKI-HI coordinator/trainer arrived one day prior to the training and met with the local coordinator. During the series of two training sessions, the trainer/coordinator provided technical assistance to personnel as they prepared to implement the model. Following the last training session the trainer/coordinator remained for an on-site technical assistance visit.

e. Provided materials for replicating agencies. Each replicating agency obtained a basic set of materials necessary for SKI-HI service delivery for each parent advisor working with families. The trainer/site coordinator worked with the disseminator to be sure the manuals were delivered prior to training.

During the 3 years of this grant, replications or scheduled replications resulted from awareness activities in the following states: CA, HI, IA (Ezone), LA, MN, NJ, OH, RI (Ecommunity), and WY. In many states, there were several replications per state. Initial plans for SKI-HI training and implementation were then put into place for each of these states. Each state committed financial resources through the combined efforts of their lead agencies (i.e., Part

H, 619, NDN state facilitators) and the local replication agencies.

Objective #5

To provide current "best practice" training to early intervention/early childhood personnel adopting the SKI-HI direct service component of the SKI-HI Model and provide monitoring and assistance services to new adoption sites and personnel.

a. Basic Training. For basic training, a national trainer/coordinator is selected by the SKI-HI Outreach staff to work with a state (or site). The trainer/coordinator conducts much of the pre-planning for this workshop by phone with the state contact person for SKI-HI. Once all preparations have been made and participants selected, the trainer/coordinator conducts the two on-site training sessions at the site, with the size of the workshop being limited to 25-30 participants for maximal training benefit. When the training is offered as a Homestudy course, modifications to the onsite schedule are made in order to allow for the homestudy portion of the course.

Participants learn how to make optimal use of SKI-HI programming in order to plan a coordinated individualized program for a family. The trainers make use of the expertise of the participants in practice and presentations. They also assist local personnel in determining ways the model can be incorporated easily into their existing programs.

A variety of teaching methods and materials are used in the training workshops. These include video tapes, slides, overhead transparencies, handouts, demonstration, lecture, discussion, small and large group work, practice, role playing, chalkboard, and direct work from the manuals. Evaluation of training is completed through evaluation at the end of the workshop and a six-month follow-up.

The trainees can obtain college credit for workshop participation through Utah State University's continuing education program. See Appendix D for an introduction to the SKI-HI Model, Table of Contents from the SKI-HI Model--A Resource Manual for Family-Centered Home-Based Programming for Infants, Toddlers, and Preschool Aged Children With Hearing Impairments, and a sample training agenda.

During this grant period, SKI-HI Outreach conducted basic training workshops for professionals/parent advisors in CA, HI, IA, LA, MN, NJ, OH, SC, WY, with CA, IA, LA, and WY conducting continuation or multiple trainings during the grant. In addition, trainees came from many different agencies within each of those states, and many became certified state

trainers during the years that followed their initial training. Following is a description of the procedure for training state certified and national trainers.

a. State Certified Trainers. The continued integrity of the SKI-HI model depends in large part on maintaining the quality of the training delivered to new users of the model. SKI-HI has developed a systematized program for preparing, certifying, and updating trainers at the national and local levels. One of SKI-HI's main goals in any state is to facilitate the establishment of a fully operational SKI-HI state trainer system.

   A prospective trainer must have experience in working as a SKI-HI parent advisor and approval of the employing replication program. After meeting these and other requirements, the prospective trainer must successfully complete about 15 hours of intensive training. The new trainer is then authorized to conduct SKI-HI training in her/his region or state.

SKI-HI conducted yearly trainer's training workshops for local/state trainers and one trainer recertification workshop during the 1992-95 grant period and 1995-1996 extension period, with a total of 55 individuals completing certification and 14 recertifying. Participating states included CA, CT, FL, IA, ID, MI, MO, MS, NE, ND, NM, NV, NY, KY, OH, OK, SC, TN, TX, UT, VT, WV, WY, and Canada. SKI-HI publishes a trainers' newsletter, maintains a roster of certified trainers, and includes sessions for trainers at national and regional SKI-HI Institute conferences.

b. National Trainer System. After maintaining ongoing certification, a locally state certified SKI-HI trainer may apply to become certified at the national level. With final approval by Project SKI-HI and his/her local program, a new national trainer can become fully certified and eligible to conduct training outside the local region or state. SKI-HI provides a training and orientation session to new national trainers. A new trainer is then teamed with an experienced trainer for at least one national workshop series. Later, a single trainer conducts each SKI-HI training. The trainer is selected on the basis of schedule availability, individual strengths, and location.

   SKI-HI monitors the performance of its trainers through workshop evaluations. All national basic training and trainer's training workshops are evaluated by the participants with a standard evaluation tool which is analyzed and summarized following each workshop by the project evaluator and coordinator. Data from evaluations are discussed by the SKI-HI staff and valid suggestions are relayed to trainers and incorporated into subsequent workshops.

SKI-HI workshops continually receive above satisfactory participant evaluations. Every

2 to 3 years, SKI-HI brings all national trainers together for essential update and re-orientation. This was last done in January of 1995, when the national SKI-HI trainers were brought in to the project headquarters in Logan, Utah for a 3-day weekend session. At that time, one new national SKI-HI trainer received orientation and certification.

Objective #6

To provide assistance to established SKI-HI agencies and support the development of a national organization to continue a leadership role among these agencies.

The SKI-HI Institute provided assistance to established agencies by providing follow-up training through annual training of local trainers (see Objective #5) and through update training provided at regional conferences (see Section VII for conference locations/dates).

A national, private, non-profit organization (AAHBEI) American Association for Home-Based Early Interventionists has been created with the help of SKI-HI Outreach. The Governing Board was established and the articles of incorporation and organizational by-laws recorded in the State of Utah. A national membership drive began during this grant period and will continue. The SKI-HI Outreach staff has assisted in the development of AAHBEI newsletters, SKI-HI newsletters, and regional conferences, mailing lists have been updated, and adoption sites have been provided with assessment and evaluation training and assessment and evaluation materials.

Objective #7

To provide evaluation services in the Outreach process and in child and family progress for new and ongoing SKI-HI adoption sites and personnel.

SKI-HI Outreach collected information on results of the Outreach process and on child and family progress in SKI-HI programming. An evaluator analyzed and interpreted the information and evaluated the data collection process itself on an ongoing basis throughout the grant period. In this way, ongoing adjustment and improvement was possible.

The training services provided through SKI-HI outreach were also evaluated continually in order to ensure that SKI-HI training was meeting the needs of the audience(s) served. These

audiences included the statewide Part H and Section 619 coordinators, the State Facilitators, the direct service personnel trained, and the agencies they represented, and the families served by Project SKI-HI.

The Project maintained files of all replication sites and a listing of these sites, with addresses, contact person(s), and telephone numbers. Every year, SKI-HI mailed a simple survey form to all replication sites to determine the current status of implementation and to update/correct addresses, telephone numbers, and the name of contact person(s). The form was printed on a self-addressed, postage-paid postcard. Sites were asked to complete and return the form. Records and lists were then updated. Through this maintenance of site records will come future local trainers, future site affiliations for mutual benefit, and future opportunities to gain child and parent data. These files also assisted the project in evaluating the ongoing utilization of SKI-HI.

SKI-HI also collected demographic and child/parent progress data from SKI-HI agencies across the country. Agency personnel were trained in assessment and data collection and entry. SKI-HI provided a demographic and child/parent progress data form for recording. In addition, the agencies obtained yearly pre- and post-treatment scores of the Language Development Scale (LDS) showing change in child language development. The data were then sent to the SKI-HI Institute Data Center for analysis. This databank also provided valuable information to replicating agencies and is used for program evaluation, funding continuation, and program improvement. It continues to be an excellent source of demographic information on infants, toddlers, and preschoolers with hearing impairments, and is a potential data base for future research. During the course of this grant, SKI-HI staff produced a National SKI-HI Data Report based on these data. See Appendix F for the SKI-HI 1992-93 National Data Report, the last year in which this data evaluation was funded.

V. Conceptual Framework For The Project

SKI-HI outreach focuses on two major areas of need. The first area has to do with the disabling conditions that the service model treats and associated intervention needs. The second area relates to effectively transferring an early intervention model through outreach to local agencies, and subsequently to implementing effective services for children and families.

These needs will be discussed below. How the SKI-HI Model and Outreach Project met these needs will be discussed in section VI.

1. **The Effects of Hearing Impairments on the Child and Family** and Associated Intervention Needs

The child served by SKI-HI programs is defined as one who is deaf or hard of hearing. Hearing is one of the primary senses that puts a child in touch with the world. Communication deficits and attendant cognitive limitations are one of the obvious consequences of this type of sensory impairment. Other delays typical in these children are social-emotional development (Bullis & Bull, 1986; Chen, Friedman, & Calvello, 1988; Correa, 1987; Fox, 1983; Gothelf, Rikhye, & Silberman, 1988; Murdoch, 1986; Watkins, 1983; Writer, 1984.)

The effect of the infant or child with hearing impairment or deafness on the family can be one that adds psychological and financial stress. The family may be in need of guidance and support (Smith, 1988). Establishment of meaningful communication between parent and child as well as a nurturing environment are critical. The loss of the idealized child, infant unresponsiveness, lack of sensitivity by professionals and many other abnormal occurrences combine to compound stress to family relationships. Parents require time to adjust and organize their lives after the birth of a child with a disability.

The effects of hearing impairment on the developing child and the family create a critical need for early identification and early family-centered intervention. Project SKI-HI recognizes this and addresses five key needs. These needs and the SKI-HI approach to meeting them are strongly supported by research, as described briefly below. References are in Appendix G.

1. The first is the need for *early identification and early family-centered intervention*. Infants and toddlers with hearing impairment or deafness must receive early intervention if their development is to be facilitated. Hearing loss has a profound effect on a child's communication and language development (McAnnally, Rose, & Quigley, 1987; Moores, 1987; Oller, 1985). The language

input a child receives during the early years of life is critical to the child's acquisition of communicative/linguistic competence and later academic skills. Many researchers maintain that a "critical period" exists for language development during the first two to three years of life, and that after that time, language is not developed naturally and successfully in the child (Boothroyd, 1982; Languis, Saunders, and Tipps, 1980; & Simmons-Martin, 1983). In order to ensure language development in children with hearing impairment during the ''critical period,'' the Joint Committee on Infant Hearing Screening recommended that the diagnostic process be completed and language habilitation begun by 6 months of age (Stein, Clark, and Kraus, 1983).

The home is widely recognized as the place where early stimulation should occur, if possible. Daily experiences that are ideal for stimulation occur in this natural environment, such as mealtime, dressing, and play. There are additional advantages of the home as the primary intervention setting. Activities can be adapted to the culture and values of the family. Other family members can be involved. Home visits can provide a less threatening setting for the family, give a more realistic picture of family dynamics and emotional needs, and provide a comfortable atmosphere for support. Further, home visits seem to result in a higher rate of parent participation (Schow & Watkins, 1989).

2. The second is the need for *family-centered intervention*. A family centered approach to intervention is necessary, not only because of legal mandates (Part H of the Individuals with Disabilities Education Act (IDEA), but because it will facilitate (a) an understanding of the child as part of a family system, (b) the identifying of family concerns and priorities for service, (c) the identifying of family resources and supports that promote family adaptation, and (d) the expanding of a base for evaluating services (Bailey & Simeonsson, 1988).

3. The third is *the need for services that address all aspects of the child's development and environment*. The IDEA stipulates attention to and service provision for all aspects of the child's life. The effects of hearing impairment or deafness on various developmental areas were discussed earlier. The assessment of child characteristics and needs in all domains (i.e., communication, motor, socialization, adaptation, cognition, sensory) must be culturally competent and adapted to each individual family and the environment in which they live and function (Anderson & Goldberg, 1991; Barnett, Macmann, & Carey, 1992; LeLaurin, 1992). Child skills, needs, and characteristics likely to affect family functioning must be determined. Developmental habilitation and stimulation must then be given as appropriate (Bailey & Wolery, 1989).

4. The fourth is *the need for transitioning the child from home to school-base programming*. A smooth and effective transition from home to center-based programming is a necessary component of the young child's total educational

programming. Effective transitioning needs to involve the parents, parent advisors, teachers and other members of the multidisciplinary team who address the gathering of information from and about the family, child assessment, staff/parent knowledge of programs, parent involvement, cooperative decision making, program modification and ongoing communication. This ensures continuous age-appropriate service for the child and positive, productive program-change experiences for family members.

5. *The need for cost-effective early intervention.* Special education programs for preschool children with disabilities must be cost-effective. A comprehensive review of the research in this area indicates that early intervention programs in general provide long-term human and economic benefits. For example, an extensive review was conducted on the costs of special education based upon age of entry into the program. The data indicated that delaying services resulted in more children requiring more special services at higher costs (Colorado Department of Education, 1984). Early education programs in general have been shown to be cost-effective; the SKI-HI model, in particular, has been verified as a cost-effective service delivery model. See Appendix G for references to this section.

2. The Need to Transfer an Effective early Intervention Model to State and Local Agencies

The SKI-HI early home intervention program was developed to meet the needs of the family and the child with hearing impairments and to transfer the program to state and local agencies which serve children and families. State and local educational agencies, Part H and Section 619 coordinators continue to request SKI-HI training and implementation assistance. SKI-HI Outreach provides an effective process for awareness, dissemination, training, technical assistance, evaluation, and product development which meets this need. The Outreach Project is described in Section VI.

VI. Description of The Model, Replication Sites, Dissemination Activities, and Training Activities

A. Description of Proven Demonstration Model--The SKI-HI Model

The SKI-HI Model is a family support model for families of infants, toddlers, and preschoolers with hearing impairment or deafness. The rationale for designing a program specifically for this population is that a sensory deprivation has a profound effect on the child and family that cannot be addressed adequately by non-categorical programming.

SKI-HI model services are delivered in the home to the family and in alternate day care settings to other significant caregivers. An early intervention professional, called a parent advisor, goes to the home on a weekly basis to work with the families, providing support and information, and enhancing the family's development of skills to facilitate their child's development. Throughout the week, parents utilize the information they have received to enhance their knowledge base and work to define the family's resources, priorities, and concerns. With the parent advisor, they develop family/child goals and select experiences and activities in which to practice new skills. The parent advisor shares information and models skills for the parents with the child, keeping in mind the unique structure and environment of the family. The parents then use the new information and skills to facilitate development in the child as they interact with him or her.

The parent advisor also helps the family facilitate interdisciplinary coordination among all professionals and agencies serving the family. The parents and parent advisor work as team members with other appropriate professional personnel in assessing the child, writing and reviewing the IFSP, carrying out and monitoring goal-oriented activities, and designing transition procedures.

The SKI-HI Model is a family-centered model. The child is identified at the earliest possible age and the parents receive support, information and training concerning the disabling condition, special considerations about parenting their child, and working collaboratively with providers of services. The parent advisor adapts the programming as appropriate to cultural background, values or other considerations. The strength of a SKI-HI home-based program is the effective involvement of the family in all aspects of the service delivery model. The parents fully participate in establishing family focused goals and the IFSP. They participate in service

coordination. They periodically review progress to establish new goals, make a communicative methodology decision, and help decide when program goals are met and home services are no longer needed. They cooperate in the transition of their child from home programming to center-based programming. As a result of early intervention, the family attains an acceptance of the child and the disability; understands and uses the programming needed by the child; establishes a communicative, nurturing environment for the child; and is equipped to continue service coordination as the child transitions to other service settings.

B. Description of Outreach Model

The SKI-HI Outreach design includes all the activities specified for EEPCD, Outreach Projects and is organized as follows to facilitate optimal capacity building:

1. Coordination with Lead Agency for Part H and with State Educational Agency for Preschool Special Education.

2. Awareness and Dissemination
   Product Development and Dissemination

3. Site Development and Assistance in Replicating the Model

4. Training
   Follow-Up Activities and Technical Assistance
   Evaluation

The above activities are described in further detail throughout Section IV which reports the accomplishments made for each of the objectives and components of the model. Figure 2 on the next page depicts the flow of outreach services to agencies in a sequential manner. However, some activities are ongoing and not specific to an implementing site. Please note that all services to sites begin through coordination with lead agencies.

Following Figure 2 is Figure 3 which illustrates the replication process an agency experiences, from primary awareness to full integration into a statewide system. Figure 2 shows how the activities and procedures described above are used to accomplish replication. SKI-HI has developed an Implementation Process Checklist which staff members use at important checkpoints to monitor this process.

Figure 2

SKI-HI Outreach Design

Sequential Services to New Adopting Agencies

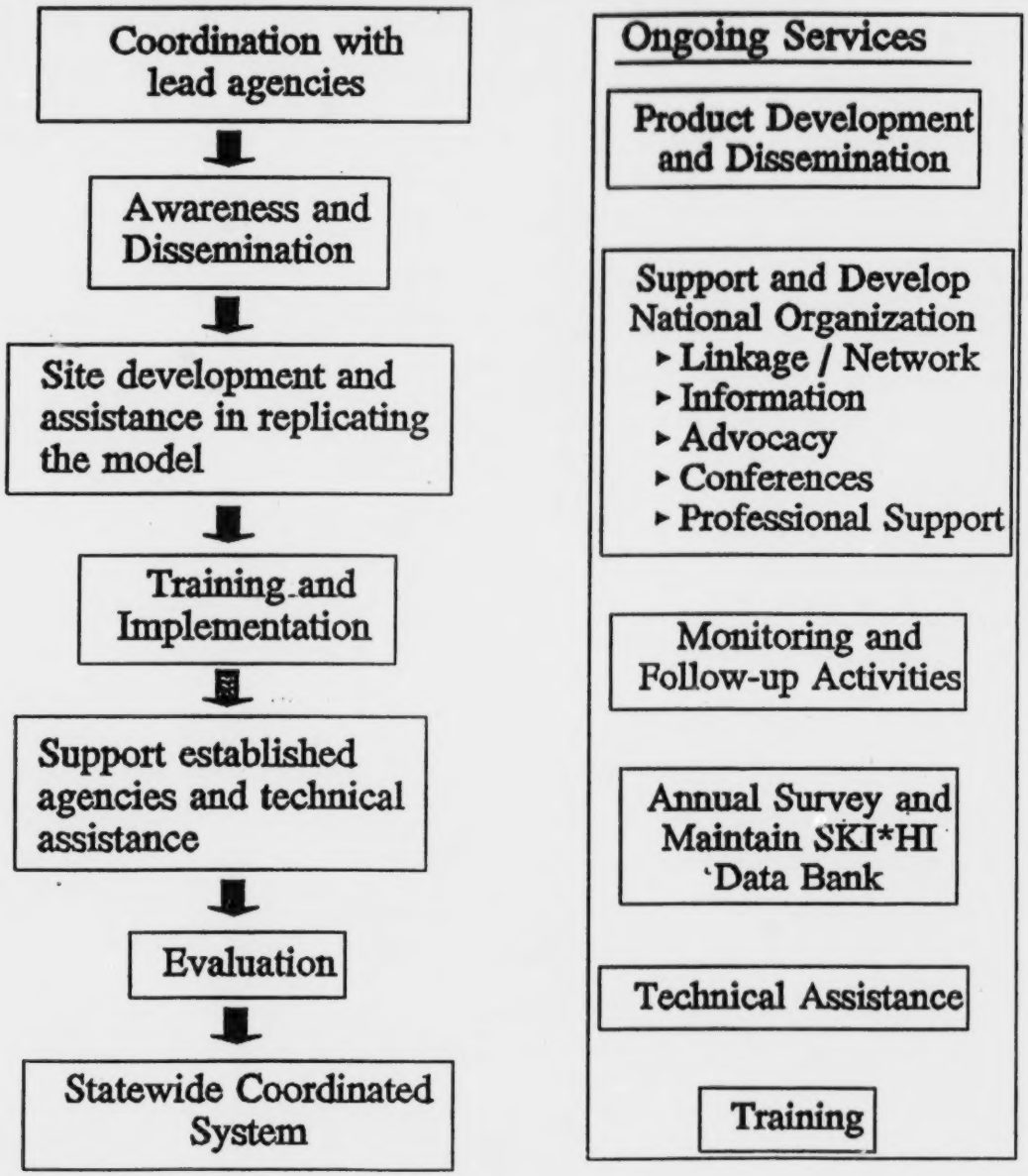

Figure 3

The Replication Process

Primary Awareness

1. Contact state and local agencies/individuals.
2. Respond to requests for information.
3. Distribute brochures.
4. Present at meetings.
5. Make preliminary determination of status, needs, and match with SKI-HI

Secondary Awareness

1. Involve all appropriate state and local decision makers.
2. Determine potential commitment of agencies.
3. Conduct awareness conference and / or awareness telephone conference.
4. Facilitate inter-agency linkage.

Selection & Site Development

1. State and local agencies write letter of request.
2. Outreach make criterion-based selection of replication agencies.
3. Outreach consult with agencies on program development and the administrative considerations of implementation.

Basic Training

1. Agencies and Outreach determine appropriate training participants and plan training.
2. Participants obtain materials.
3. Conduct basic training.

Implementation

1. State and local agencies develop service delivery system.
2. New parent advisors deliver services.
3. Agencies develop administrative and supportive components.
4. Agencies maintain inter-agency cooperation.

Follow-Up & Monitoring

1. Coordinate with state agency
2. Address needs identified during post-training consultation.
3. Monitor implementation 6 and 12 months after training.
4. Conduct basic training of additional personnel.

Training of Trainers

1. Recruit potential locally certified trainers among newly trained parent advisors.
2. Train and certify qualified parent advisors as state / local trainers.
3. State / local trainers maintain high quality training of new personnel.

Technical Assistance

1. Disseminate latest information and materials to agencies / individuals.
2. Continue support to certified trainers.
3. Agencies and individuals participate in regional conferences.

Statewide Coordinated System

1. SKI-HI is a part of the comprehensive statewide system for early childhood special education.
2. Outreach maintains contact with state lead agencies and replicating agencies / individuals.
3. New local agencies in state are referred to Outreach.

Repeat Replication Process

VII. Methodological/Logistical Problems And How They Were Solved

The project faced challenges in two main areas during the grant period: (a) a change in the needs of states, agencies, and training participants and (b) a need to maintain closer contact with the agencies and individuals who had received training and assistance in past years. These challenges, and the response by SKI-HI Outreach, are described below.

Challenge #1: The Change in Outreach Needs

When SKI-HI was first providing outreach training and assistance, the recipient agencies and individuals were those specifically serving children with hearing impairments in special programs. Typically, these agency personnel had a specialized educational background, training, and work experience with this population and SKI-HI training had been designed to build upon this existing knowledge and expertise. Training consisted of two 3-day workshops, with 6 to 8 weeks in between.

With the advent of P.L. 99-457 and P.L. 102-119, children with low-incidence disabilities such as hearing impairments are now also beginning to be served within early intervention/early childhood programs for all infants, toddlers, and preschoolers with disabilities. In addition, states are expected to maintain more coordinated statewide services to children in the birth to 5 age range. The changes in service setting and state needs have opened a new service field and increased demand for SKI-HI Outreach services.

When the SKI-HI service model is delivered through local school districts and early intervention agencies, often the personnel who deliver it have not been trained to serve children with low-incidence disabilities such as deafness. Instead, they have generally received cross-categorical training, and may never have worked with a child who is deaf or hard of hearing. with sensory impairment. The need for training to help prepare these personnel to effectively serve children with specialized needs has become acute.

Another problem encountered in facilitating the training is that often only one or two persons from an entire agency serve children who are deaf or hard of hearing. In addition, most early interventionists who are working with these children and need the specific training offered through SKI-HI are generally scattered through several agencies over large geographic areas. Except for the larger metropolitan areas, there may only be a few children with hearing

impairments within each local early childhood or parent-infant program.

During the three years of this Outreach grant period, Project SKI-HI Outreach addressed these concerns by developing an awareness and training format designed to be flexible in meeting a variety of needs. In responding to today's demand for coordinated statewide services and for systemic change, SKI-HI Outreach conducts all awareness, dissemination, planning, training, and technical assistance through close cooperation with state education coordinators, Part H and Section 619 coordinators, and other lead agencies for services to children ages birth to 5 and their families.

Training is now offered in two formats, on-site and home-study. Both formats are designed to meet individualized participant needs. In the on-site training format, the first 3-day workshop is devoted to an overview of the SKI-HI model and resource manual, and in-depth training on hearing aid and communication programming. Participants choose an assignment that they will complete between workshops. In the second workshop, in-depth training is provided on auditory and language programming, as well as a practicum on assessing a child and planning for appropriate service provision. Trainers make use of the specialized expertise in each training group by inviting participants to assist in presentation in their specialty areas.

In the home-study format, the participants choose and complete one assignment before coming to the first 1 1/2 day workshop, which provides an overview of the program and an introduction to some of the program topics. Next, they choose and complete seven additional home-study assignments. At the second 1 1/2 day workshop, they are introduced to other program topics and complete a final application exercise. See Appendix E for a SKI-HI training format overview.

This new approach to training and coordination has several benefits in meeting Challenge #1:

1. SKI-HI training may be adjusted and tuned to meet the needs of each group of trainees. The expertise and knowledge of participants is acknowledged and utilized. Participants become more aware of the resources they have in their own local area.

2. The home assignments give participants a chance to become involved and get hands-on experience with SKI-HI. This contributes to a deeper understanding of the program and resources by the end of the training period. Homestudy

assignments also enable participants to apply what they are learning on a daily basis, and give them the opportunity to choose areas of focus for their studies.

3. Greater involvement by state agencies can help fill states' needs for a more coordinated approach to early intervention. SKI-HI provides a crucial component in the states' provision of services to the birth-to-5 age group in fulfillment of requirements under Parts H and B of the Individuals with Disabilities Education Act.

For each of the sites which have received training during the reporting period, SKI-HI staff and trainers have consulted with the local coordinators before and after training in order to ensure continuity of implementation. Through the development of a central contact, either in the form of a state-level steering committee or through key agencies, the project has been able to further state-wide implementation by utilizing these committees to ensure that qualified personnel are selected for basic training and as state and local trainers.

Challenge #2: The Need to Maintain Closer Contact with Previously-Trained Agencies and Individuals

SKI-HI Outreach has conducted a survey of sites every year to update records and determine the yearly impact of SKI-HI. Outreach staff knew, however, that more information was needed about SKI-HI user agencies and individuals if appropriate technical assistance was to be delivered.

Therefore, a comprehensive survey of replication sites was conducted nationwide. There were two purposes: one was to determine the status of programming in these agencies. The second purpose was to determine what the agencies perceived as their greatest needs for ongoing technical assistance from the Outreach project.

The response indicated that the agencies were continuing to use SKI-HI programming and materials and were reading and using the newsletters and other mailings. They wanted to continue receiving information and materials, and in addition, they wanted more opportunities for update training as well as certification of experienced parent advisors as trainers in the local areas.

In the area of need for and interest in technical assistance, the most frequently requested categories on the survey were (1) regional conferences and (2) administrators' sessions at regional conferences.

During the grant period, SKI-HI Outreach joined with INSITE Outreach, another EEPCD project, to sponsor regional conferences. Conferences held during this period included the Western Regional SKI-HI/INSITE Conference, Durango, Colorado, August 4-6, 1993, the Southeastern Regional SKI-HI/INSITE Conference, St. Louis Missouri, June 16-18, 1994, the Northeast Central SKI-HI/INSITE Conference, Flint, Michigan, June 23-24, 1994, and the Northwest Central SKI-HI/INSITE Conference, Sioux Falls, South Dakota, July 13-15, 1994.

The goals that were accomplished through these conferences were (1) to bring SKI-HI and INSITE users together to share and gain new knowledge, (2) to establish closer contact between Outreach Project and these users, and (3) to encourage these regions to continue holding periodic regional conferences on their own. Additionally, SKI-HI Outreach is contributing staff consultative time and financial support to the groups who have taken on the responsibility of planning future conferences, while the SKI-HI Institute remains committed to sending one or more staff members to future conferences.

Evaluations and comments from all the regions continue to indicate that regional conferences are an excellent way to provide needed assistance and information as well as keep channels of communication open among SKI-HI users and between users and the SKI-HI Institute.

VIII. Evaluation Findings

A. Impact on Children and Families

Data on children with hearing impairment and their families demonstrate that SKI-HI home-based programming has a very positive impact. SKI-HI programming was validated by the Joint Dissemination Review Panel (JDRP) for two 6-year terms, and in February of 1991 received its third 6-year validation approval from the Program Effectiveness Panel (PEP). In addition, the Office of Special Education and Rehabilitative Services (OSERS) funded another SKI-HI Institute Project (Project R.E.A.P.) to analyze the data collected on children served from 1979 to 1991 by SKI-HI adoptions across the country. In both the Revalidation Study and the Project R.E.A.P. Study it was shown that SKI-HI programming results in positive child achievement, accelerated developmental growth including a rate of language gain for SKI-HI children that is greater during intervention that would be due to maturation alone, positive parent-skill acquisition and early identification of hearing loss. A copy of the REAP study is available upon request. Data collected and analyzed during this grant period are included in the SKI-HI 1992-93 National Data Report, Appendix F.

IX. Project Impact

A. State-of-the-Art Materials

The SKI-HI Project has developed, produced, and revised a variety of materials for use in training early intervention/childhood professionals in working with infants, toddlers, and preschoolers with sensory impairments and additional disabilities and their families. These materials have been distributed by the SKI-HI Project at the SKI-HI Institute and HOPE, Inc. in Logan, Utah. Below is a list of SKI-HI materials currently available. A full description of the listed materials is available upon request:

Printed Material

1. The SKI-HI Model: Resource Manuals (2 volumes) for Family-Centered Home-Based Programming for Infants, Toddlers, and Preschool Aged Children With Hearing Impairments, revised 1993
2. SKI-HI Topic Summary and Challenge Sheet Pads
3. SKI-HI Language Development Scale
4. Sign Language for the Family: A Total Communication Picture Reference Book to Accompany SKI-HI Total Communication Videotape

Video Tapes

1. Auditory Levels
2. Assisting Parents Through the Mourning Process
3. Aural-Oral and Sign Options for Hearing Families in Early Home Programming
4. Close-ups of SKI-HI Children
5. Cued Speech: Another Option (2 videotapes and monograph)
6. Family Focused Interview (videotape and workbook)
7. Hearing Aid Management Skills for Families of Young Children Who Are Deaf or Hard of Hearing
8. Overview of the SKI-HI Model
9. SKI-HI Home Total Communication Videotapes
10. What Is a Parent Advisor?

Monograph Series

1. Monograph #1: Puppet fun for Hearing Impaired Children
2. Monograph #5: SKI-HI Programming for Families of Children with Recurrent Otitis Media
3. Monograph #6: Parent Advising; Personal Experiences and Reactions
4. Monograph #8: Cued Speech: Another Option

SKI-HI Materials in Spanish

1. SKI-HI Topic Summary and Challenge Sheets
2. SKI-HI Language Development Scale Test Forms
3. Sign Language for the Family: A Total Communication Picture Reference Book to Accompany SKI-HI Total Communication Videotape Program
4. Parent Notebook
5. Developmental History Form

The SKI-HI Outreach Project is a growing, changing model that is concerned with services provided to families of young children with hearing impairments. The Institute staff are continually working to create and revise program materials so that the model represents the latest research and best practice in the field.

Project SKI-HI also contributes to the SKI-HI Institute newsletter that goes out to more than 2,000 individuals and agencies throughout the country four times a year. The project also contributes to the biannual "Trainer's Tidings" that is mailed to all local and national SKI-HI, INSITE, and VIISA trainers/instructors across the country.

B. Summary of SKI-HI Activities

Project SKI-HI assists with the annual survey that goes to replication sites and programs around the country. That information, along with data kept at the project office provide the information needed for the SKI-HI fact sheet which follows. These reflect the impact SKI-HI has had for the grant period 10-01-92 to 9-30-95 and for the extension period from 10-01-95 to 5-31-96.

Summary of Impact of SKI-HI Activities 1992-1996

	National
Dissemination of information to state agencies	50
Number of SKI-HI courses, taught in states	14
Number of Children estimated to benefit from training participants received from the SKI-HI courses	700
Consultation provided to sites	24
Instructor workshops to certify new state trainers	3
Number of new state instructors certified and receiving training materials	55
National staff meetings for update, retraining, and revision of training packages	1
Number of national SKI-HI instructors	7

X. Future Activities

A. Training, Impact on Professionals, Programs, and Families, Assistance to Sites

Project SKI-HI wrote a grant application for a new 3-year period (1996-99) through OSEP-EEPCD and has been funded to implement a new Outreach Project with states and programs around the country as well as to provide continued assistance to established sites. Continuation funding will also enable the project to develop new training and curricular material as needed.

This Outreach Project will take a new, integrated approach to family-centered programming. It combines the proven SKI-HI Model with the newly tested Deaf Mentor Program. Deaf Mentors are deaf adults who share their language - - American Sign Language - - and their culture with the child and family. This program has been used for three years in Utah in conjunction with the Utah SKI-HI Parent Infant Program, in an OSEP Experimental Project and is now ready for outreach.

Through this new SKI-HI Outreach grant, the following impact is expected.

1. At least 75 professionals per year in four states will receive training in SKI-HI and Deaf Mentoring during the Project. Each trained professional is estimated to serve a minimum of two children annually with the SKI-HI material.

2. SKI-HI will continue to grow and expand in most of the states where training has taken place. An estimated 1500 families and 700 professionals per year in continuing SKI-HI agencies will receive ongoing assistance through such means as consultation, conferences, and newsletters.

3. An estimated 30 new state instructors will be trained through the state instructor training workshops conducted annually.

4. The Project will participate in regional SKI-HI/INSITE/VIISA workshops in several locations around the country.

5. Technical assistance can continue to be provided to the existing sites.

B. New Products and Materials

Through this new grant, the following materials are being written, tested and/or revised:

1. The Family-Centered Programming Notebook will be completed.

2. A Emerging Literacy Monograph will be produced and distributed.

3. The SKI-HI/Deaf Mentor Trainer's Manual will be produced for use in training.

   A SKI-HI Deaf Mentor Procedural Handbook will be produced for use in training.

   A SKI-HI/Deaf Mentor Training Video will be produced for use in training.

   A SKI-HI/Deaf Mentor Transparency Set will be produced for use in training.

   A SKI-HI/Deaf Mentor Handout Series will be produced for use in training.

4. The SKI-HI materials will be repackaged in modules. This will enable the Institute to better fit the needs of parent advisors nation wide.

5. Four yearly newsletters will be sent to over 2,000 professionals in the SKI-HI Institute network.

6. Two yearly Trainers' Tidings will be distributed to all national and local trainers and instructors.

7. Information will be updated for instructors and trainees on research and best practice approaches to use with this population of young children with hearing impairments.

XI. Assurance Statement

SKI-HI confirms that the full text of this report is being sent to ERIC and that copies of the title page, overview, and summary have been sent to the others addressed on the attached sheet.

APPENDIXES

APPENDIX A

Sample Newsletter

SKI-HI INSTITUTE

NEWSLETTER

SKI-HI INSTITUTE
Utah State University
809 North 800 East
Logan, UT 84322-1900
(801) 752-4601

Fall Issue
Volume XIX
October 1995

THINK HOW FAR WE'VE COME!

BY
DOROTHY JOHNSON

Since the SKI-HI Institute Newsletter will change to a combined format with the AAHBEI Newsletter with the next issue, the SKI-HI staff thought it would be fun to share some reminiscences of the two earliest Institute models, SKI-HI and INSITE, with you.

We recently reestablished contact with one of the first families ever in the Utah SKI-HI Parent-Infant Program during the developmental years. They are the Casperson family, and it was a great pleasure to talk with Julie and her parents now that Julie has grown up. We also asked Sue Watkins, who was then their parent advisor, to share her memories. An article about those conversations is included in this issue. As many of our readers know, SKI-HI got its start as a demonstration model in Utah back in 1971. During those early years, we were lucky enough to have Tom Clark as Director, Skip Reese as Coordinator, and Sue Watkins as Audiologist and Parent Advisor, with the support of Robert Tegeder as Superintendent of the parent agency, the Utah Schools for the Deaf and the Blind. This team, along with the early parent advisors, wrote and field tested the first SKI-HI Manual between 1971 and 1975. The fruit of their dedication and commitment has been years of growth, joy, and excellence of service to the families of children who are deaf and hard of hearing across the United States and in foreign lands.

INSITE was created in 1981 and began its life at the Utah Schools for the Deaf and the Blind as well. Tom Clark as Director and Bess Morgan as Coordinator took INSITE through its development years. In this issue, Bess tells that story in a wonderful way. INSITE has also spread throughout the United States and is in much demand by those who work with the families of young children who are sensory impaired with additional disabilities. Enjoy!

"We Call It Intervention, But It's Really Another Form Of Love"
by Barbara Glover

This is how Glen Casperson describes the SKI-HI intervention that his family received after his daughter Julie was diagnosed with a hearing loss. Julie Casperson is the second of four daughters of Becky and Glen Casperson. Julie was two years old when her parents began to think that perhaps she was not hearing, that maybe she was missing out on some of the things that were going on around her. At this point in time Becky felt frustrated. "We didn't know what to do or where to go or who to see." Whenever Becky and Glen took Julie to the pediatrician he would say that she was quick to respond and track objects. He really couldn't see anything that would indicate that Julie had a hearing loss. At 2 1/2 after further testing it was confirmed that Julie did have a hearing loss and she was sent home from the doctor's office with hearing aids.

Glen described this as a "shock." "We didn't know what we would be faced with. It was all unknown." Becky

Julie Casperson
— Then —

related that Julie did not like to wear the hearing aids at first. "We would find them downstairs or in the grass. One time Glen ran over them with the lawn mower." SKI-HI Early Home Intervention was very comfortable for the Caspersons as the whole family participated together. Glen remembers, "We learned together how to help Julie learn to use the hearing aids and learn to speak." As Becky says, "Our parent advisor was such a blessing in our lives! We needed that experience...I don't know what we would have done without it."

Julie is now a very capable young woman and a new bride. She communicates very well with friends and family. The Caspersons are a great example of love, encouragement, and knowing that there is no limit to what you can do.♦

Memories Of Early Days With The Caspersons
by Sue Watkins

It was always a real joy to go to the Casperson home in Brigham City. I looked forward to visiting this family with great enthusiasm. There were several reasons this was so. First, both Glen and Becky were very dedicated and committed to their children and to Julie. They wanted what was best for Julie and were diligent in discovering and learning ways to meet her needs and maximize her potential. They were also such loving and caring parents and so supportive of each other and their children. Next, I'll just have to admit that Julie was (and definitely still is!) a real charmer! As a little girl, her cuteness, animation, gregariousness and charm were very apparent to everyone. She was always responsive to the home visit activities and approached almost everything she did in a spirit of fun. Another reason I so enjoyed visiting this family was because most of the time, all of the family members were there. It was very rewarding to work with the whole family and see their interest in and support of Julie and the SKI-HI Program in action.

Julie Casperson
— Now —

I remember many of the visits with satisfaction and fondness...but one visit in particular stands out in my mind. Julie's dad had just come home from duck hunting, and he was sort of flinging the carcasses in a pile in the garage. I will never forget Julie's big eyes getting bigger and bigger at the sight of this. Her dad (always looking for opportunities for language input, of course!) made a big deal out of the stacking process and then later about the pain each dead bird was feeling as he pulled the feathers out. Julie was very enthralled with all of this and learned an incredible amount of new language in a very short time including bleed,

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hurt, tug, tug harder, pinfeathers, big ow's, little ow's, and the like.

It was a real pleasure to serve the Casperson family and to see Julie's communication, language, and personality unfold and grow. Today, Julie is a very communicative, very charming, very lovely young woman whose family is very, very proud of her! ♦

The Early Years of INSITE
by Elizabeth Morgan

In the Summer of 1981, the INSITE model demonstration grant was funded as a combined effort of the Utah School for the Blind and the SKI-HI Institute at Utah State University. I was hired on as full-time coordinator of the grant. Other part-time staff members included nine parent advisors, two of whom are Susan Williams and Phyllis Snow, national trainers for INSITE Outreach; Tom Clark, director; Juanita Watts, psychologist; Pat Boyle, consulting physical therapist; Dr. Armstrong, ophthalmologist; and audiology staff at the Utah School for the Deaf.

INSITE's mission, in part, was to provide weekly home visit services to families of thirty children who lived in the rural areas of the state. The disabilities of these children ranged from total blindness or partial sight with no other impairments to children who were deaf-blind and sensory impaired with additional disabilities. Those of you familiar with the size of our western states can understand the distances that lay between these families and the main project office in the northern part of the state. So, the project recruited and began to train nine part-time parent advisors who lived in the rural communities of the state to work with these children and their families.

The parent advisors were brought in to the School for the Blind several times a year for staff meetings and training. As coordinator, I had weekly contact with them by phone and read and responded to monthly home visit reports. Then, several times a year, along with another staff member (e.g., the psychologist, the physical therapist), we traveled the state to visit each parent advisor and the children and families they served. I remember one fall, when we decided to do the eastern and central areas of the state in a two-week trip. When we arrived back home, we had covered 3,000 miles!

These were multipurpose trips with agendas that usually took us from morning till night. We visited homes; the preschool programs that some of our children were integrating into; conducted workshops for parents; visited health nurses; and provided some pediatric physical therapy consultation for families, sometimes in conjunction with a local therapist. Many of the first INSITE children had motor problems and there were few therapists in the rural areas of the state who had worked with these kinds of children before. The project's consulting therapist helped to provide some training to these local people on some of these trips. Sometimes, we had a few extra minutes to take a side trip into one of the many wonderful national parks of southern Utah (e.g., Bryce, Zion, Arches, Capitol Reef).

Another big task was to get pulled together on paper what it was that we were doing in homes with our first INSITE families. Tom Clark was always reminding me to work on this part of the INSITE project since the direct service part of the program was my first love. Little by little, the first set of INSITE resource manuals began to come together with the help of Pat, Juanita, the nine parent advisors, and other consultants.

Each summer, we would bring the parent advisors who were interested in curriculum writing together for a week in the dorms of the School for the Blind to work on the INSITE resource manuals. The walls of the room we worked in had chart paper with writing on it all over the place. One of those weeks, the maintenance staff forgot to turn the hot water back on for us since all the dorm students had gone home for the summer. So, we had to live with a week of cold showers. We were the only people in a large, empty, spooky dorm which used to be a sanitarium in the old days. It had an old morgue in the basement. For those of you who are newcomers to INSITE, the first set of manuals had four volumes, not the two that now exist as a result of revisions made in 1989.

The third year of the INSITE model demonstration grant was a very busy one, with several new things starting to take shape.

The first had to do with the "intervener concept." Both Tom Clark and I had the opportunity to visit Canada to learn more about their use of interveners with deaf-blind children and youth. We then had John McInnes, one of the key players from the Canadian program, come visit us in Utah. I remember that visit quite well, since I had just learned

to drive a stick shift. I was given an old stick shift station wagon to pick Mr. McInnes up from the Salt Lake airport and I was very nervous about driving it. Sitting at a stop light in downtown Salt Lake, I put the car into reverse instead of forward when the light turned green, barely missing front ending the person behind me. Our guest offered to drive.

Following that visit, we obtained permission from our project officer in Washington, DC, to use some of the third year INSITE grant monies to train and put interveners into the homes of six young preschoolers who were deaf-blind in our Utah program. What we learned through this trial phase helped to form the base for a new intervener grant application the following year. Utah has continued to work with the intervener concept since the early years of INSITE through both federal and state monies.

In the winter of our third year, INSITE staff also wrote a state grant to pilot the use of teacher consultants for the blind and visually impaired to serve school-age children in the rural areas of the state. We had the backing of the special education directors in the rural school districts. Some of our INSITE children were moving into school-age programs and for their families, the only educational choice was to send them hundreds of miles away from home to the state school, or keep them in their local community with consultative services from a vision specialist 2-3 times a year. There were no trained vision teachers in the rural areas and no teacher training program for vision in the state at that time.

With the little bit of state funding we had, time from INSITE, and the time of another School for the Blind staff member, Dorothy Smith, we started the process of recruiting part-time regular or special education teachers in the rural areas of the state. We began to give them some training and supervision as they provided weekly services to students with partial sight in those rural communities of Utah. A year later, permanent state funding for this school-age outreach program was obtained from the legislature. This program has now grown to serve 147 children and youth with a full-time director and eleven teacher consultants, seven of whom have or are working on their vision certification through a special training program in the state.

Also, during that third year, with the help of our INSITE families and the Schools for the Deaf and the Blind, permanent state funding was obtained from the legislature to continue the services families in the rural areas had been receiving during the three year grant period. And towards the end of that third year, the INSITE outreach grant which we had written was approved for funding. This was to begin INSITE's ten-year history of outreach and training across the United States.

Over the past ten years, INSITE has provided training to hundreds of parent advisors who have used the information in the resource manuals with over 2,300 children and their families per year in 30 states across the country. INSITE has continued to produce new materials for use by parent advisors and state and local trainers. INSITE funded "out of hide" the writing of the VIISA resource manual. This made it possible to obtain funding for the VIISA model inservice training grant for preschoolers with vision impairments.

There is still much work for INSITE to accomplish, one of which is a much needed second revision of the resource manuals to be completed over the next few years. INSITE is also embarking on a new adventure, that of offering training through a combined onsite/home-study format that has already been successfully used by both the SKI-HI and VIISA projects. States will still have the option of using the six-day onsite format as well.

Let's all hope that our present Congress doesn't put an end to this project which has helped to bring about a great deal of good over the last 13 years. Long live INSITE!♦

The Katie Beckett Waiver

by Elizabeth Morgan

The Katie Beckett Waiver is a way to get Medicaid for a child when the parent's income is too high for them to qualify for Supplemental Security Income (SSI). To apply for the waiver, the parents must first apply for SSI and be turned down, then provide a copy of that rejection letter in their application to Medicaid.

Katie Beckett was a little girl in the 1980's who had many medical and physical complications. Her parents

wanted her to come home from the hospital to live with them. The family income was higher than social security allowed in determining SSI; however, the income was not nearly enough to cover all the medical and therapy bills. Eventually, a special Medicaid Waiver was granted so that Katie Beckett could live at home with her family. Since that time, the Katie Beckett Waiver has helped many children who would have been forced by Medicaid regulations to remain permanently in hospitals or institutions. Present welfare reform in Congress threatens to eliminate funding for this waiver.

The Katie Beckett Waiver is administered at the state level and is, therefore, only available to residents of the states that have adopted it. Most states have some form of the waiver and regulations are often complex and vary widely.

In general, the waiver may apply to a situation involving a child with a disability under the age of 18 for whom home care is appropriate and in which the child needs a level of care equivalent to that given in an institution. The cost of home care must be less than or equal to the cost of institutionalization. The waiver is also only available to children who would qualify for Medicaid should they be institutionalized. However, the child with the disability does not have to be in an institution to qualify for it.

This Medicaid waiver may help to pay for things such as doctor and hospital bills, medicines, therapy and adaptive equipment. Families with insurance may apply for the waiver, too.

If a family is interested in applying for the Katie Beckett waiver, they should contact the Medicaid office in their state. Since not all the Medicaid workers may know about the waiver, the parents may need to be persistent in their efforts. The application process is quite long (especially with the SSI part) and parents may need some encouragement along the way.

If their Medicaid application is denied and they think they qualify under the Katie Beckett Waiver, parents should then contact their local Protection and Advocacy office or the local legal services office for advice. For their local offices, they may contact the National Legal Aid and Defense Association, 1625 K St., NW, Ste. 800, (202) 452-0620 (voice), (202) 872-1031 (fax).◆

'85 MIDDLE EAR MONOGRAPHS AVAILABLE

If you can use copies of the 1985 edition of the Middle Ear Monograph, you are welcome to them at no cost. The information is still very usable, but it was written to accompany the 1985 edition of the SKI-HI Manual. A new 1994 update is now in print to accompany the 1993 SKI-HI Manual.

Please contact Fran Payne at SKI-HI Institute, (801) 752-4601 (phone) or (801) 755-0317 (fax), soon if you would like some of these monographs.◆

NEW SKI-HI AND INSITE LOCAL TRAINERS

The SKI-HI Institute is pleased to announce the addition of 21 new SKI-HI and INSITE local trainers. Trainings were held in June in Des Moines, Iowa, and in Ogden, Utah.

Back Row (L to R): Richard Miske, Lois Mahoney, Kathy Carter, Velda Hill, Jeanne Fowles, Marian Smout, Gay Teter, Barb Schneider.
Front Row (L to R): Kay Hansen, Joan Fargnoli, Lorie Ybarolla, Amy Bove, Nanette Serrano, Missing: Carol Winn.

Thirteen Parent Advisors representing seven states attended the SKI-HI Training Workshop conducted by National Trainer and Institute staff member, Dorothy Johnson. The following people are welcomed into the SKI-HI family as qualified Local Trainers: Nanette Serrano (CT), Lorie Ybarrola (IA), Barb Schneider (IA), Richard Miske (IA), Joan Fargnoli (NY), Velda Hill (OK), Gay Teter (OK), Jeanne

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Fowles (UT), Carol Winn (UT), Marian Smout (UT), Amy Bove (VT), Kathy Carter (WY), and Lois Mahoney (WY).

Eight Parent Advisors representing four states completed the INSITE Local Training Workshop conducted by National Trainer and Institute staff member, Elizabeth (Bess) Morgan. We welcome the following Parent Advisors into the INSITE family of Local Trainers: Donna Embree (LA), Diana Smith (LA), Amy Twetten (IA), Jan Lamm (IA), Donna Bachman (IA), Teresa Smith (OH), Emily Taylor-Snell (OH), and Jane Seaton (GA).

Left to Right: Emily Taylor-Snell, Jan Lamm, Teresa Smith, Donna Embree, Donna Bachman, and Amy Twetten.

Our congratulations are extended to these Parent Advisors who contributed many ideas with much enthusiasm to the trainings. We are pleased by the dedication to families and young children expressed by these new Local Trainers and wish them well as they begin training in their own states and local areas. We remind these new trainers that they need to contact the Institute prior to their first training to receive the required assistance from a National Trainer.♦

CONFERENCE CALENDAR

NATIONAL CONFERENCE FOR ACTIVE LEARNING FOR INFANT, PRESCHOOL, AND MULTI-IMPAIRED BLIND AND VISUALLY IMPAIRED CHILDREN: AN AMERICAN REVIEW featuring speakers from across the U.S., November 13-17, 1995, Seattle Washington. Nationally recognized practitioners who have been instructed by Lilli Nielsen in her Active Learning Approach will share what they have been doing since her materials were introduced in the United States in 1991. Participants will have the opportunity to learn firsthand about innovative and unique growth environments, such as "The Little Room," "The Resonance Board," "The Bench," and other equipment. Registration fees are $300 for professionals and $200 for parents before October 6, 1995. Those interested should contact: Sherry Raynor, The Blind Children's Fund, 2875 Northwind Drive, Suite 211, East Lansing, MI 48823-5040, Tel: (517) 333-1725, Fax: (517) 333-1730; or Didi Goodrich, Resource Center, The Blind Children's Fund, 2971 53rd Street SE, Auburn, WA 98092-8310, Tel: (206) 735-6350. ♦

NEW PRODUCTS

Products listed in the SKI-HI Institute Newsletter do not imply endorsement by SKI-HI Institute. They are provided for informational purposes only.

Starting Points is an excellent new book available from the Blind Children's Center in Los Angeles on programming for children with multiple disabilities whose impairments include vision. Address/phone number of the center are 4120 Mara- thon Street, Los Angeles, CA 90029-0159, (213) 664-2153.

Your Baby and You is a new 25-minute videotape and booklet for parents of infants who are premature. It is designed to help caregivers understand what various behaviors are communicating. For those of you familiar with Premie Potential, this is a nice replacement since that one is no longer available. Order this from Communication and Therapy Skill Builders, (602) 323-7500, in Tucson, AZ.

The Hoyt-Akeson Selected Readings in Pediatric Ophthalmology is an excellent binder of research articles for medical and educational professionals working with infants and preschoolers with visual impairments. It is available for $67.50 from Blind Babies Foundation, Attn: Selected Readings, 1200 Gough Street, San Francisco, CA 94109. Call (415) 771-5464.

Technology for Tots is an inexpensive booklet on using computers with preschool children who have visual impairments. It is available from The Lighthouse National Center for Vision and Child Development, 800 Second Avenue, New York, NY 10017. ♦

NATIONAL TRAINING CALENDAR

SKI-HI

Iowa January 11-12, 1996
Trainer: Tracy Duncan April 18-19, 1996

INSITE

Louisiana August 3-5, 1995
Trainers: Mary Franks/Donna Embree/ October 19-21, 1995
Diana Smith
Alaska October 15, 1995
Trainer: Tanni Anthony February 11-13, 1996

VIISA

Pennsylvania - West in Gibsonia September 15-16, 1995
Course on Infants and Toddlers December 1-2, 1995
Instructors: Team of State Instructors

Pennsylvania - East in King of Prussia September 29-30, 1995
Course on Infants and Toddlers December 8-9, 1995
Instructors: Team of State Instructors

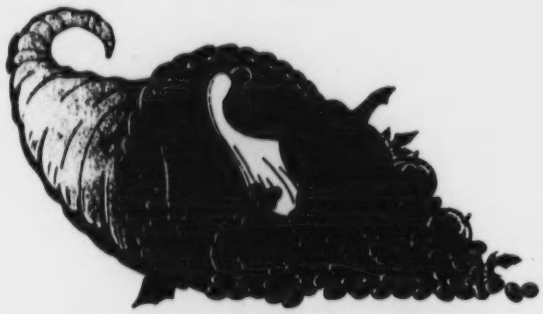
West Virginia - Onsite #1 October 6-7, 1995
Course on Infants and Toddlers
Instructors: Team of State Instructors with Lois Hammett

Florida October 19-20, 1995
Planning and Training with State Training Team
Instructor: Debbie Gleason

Florida December, 1995
Course on Infants and Toddlers
Instructor: State Training Team

South Carolina October - December, 1995
Course on Preschoolers
Instructors: State Training Team and Lois Hammett
Missouri Fall, 1995
Course on Preschoolers
Instructors: State Training Team

Follow-up sessions for VIISA participants in Louisiana and Ohio are also in the planning stages.



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SKI-HI INSTITUTE
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Utah State University
Logan, Utah 84322-1900

ADDRESS CORRECTION REQUESTED

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APPENDIX B

Family Resource Notebook:

Cover Page & Table of Contents

FAMILY RESOURCE BOOK

Editors: Mary Ann Parlin
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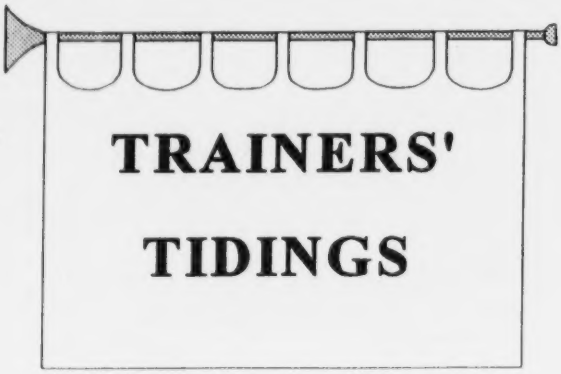
APPENDIX C

Trainers' Tidings: Table of Contents



A Newsletter By and For SKI-HI Institute Trainers and Instructors

Volume 6, Issue 1 *November, 1995*

Greetings!

The purpose of this newsletter is to keep you informed about training activities of the SKI-HI Institute, as well as to share materials and ideas that can be used in training.

This issue contains:

SKI-HI INSTITUTE NEWS
- Revisions to Trainers' Manuals: VIISA & INSITE
- Celebrate with Three National Trainers!

TRAINING NEWS
- Surrounded by Mountains, Spirited New SKI-HI Trainers Teach Each Other
- Eight New INSITE Parent Advisors
- National Training Calendar

TRAINING IDEAS AND RESOURCES
- Music Game or Quiz for INSITE
- A Learning Activity for Topic: Roles and Characteristics of the Parent Advisor
- Tips from SKI-HI Trainers
- Tips for Instructors

NATIONAL AND LOCAL TRAINERS

NEW RESOURCE ARTICLES AND MATERIALS
- The Katie Beckett Waiver
- An Overview of Adult Learning Principles
- New Products
- And Then Some
- Attitude

FORMS EVERY TRAINER NEEDS
- Training Reports and Attendance Lists: Essential to Send to SKI-HI Institute

CONFERENCE CALENDAR
- Zero to Three's 10th National Training Institute
- National Conference for Active Learning for Infant, Preschool, and Multi-Impaired Blind and Visually Impaired Children: An American Review

Trainers' Tidings, published twice yearly by the SKI-HI Outreach Staff

APPENDIX D

The SKI-HI Model

Overview

Volume 1: Table of Contents

Volume 2: Table of Contents

Sample Agenda

*Introduction to the Ski*Hi Resource Manual*

This introduction includes two sections. The first section overviews the SKI*HI Resource Manual. The second section describes the use of the manual.

OVERVIEW OF THE SKI*HI RESOURCE MANUAL

In 1990, a nationwide survey was conducted to determine what resources would be most helpful for parent advisors working with families of young children who are hearing impaired. Parent advisors were asked to make suggestions concerning updates, revisions, and additions to the 1985 SKI*HI Manual that would be most useful and beneficial to them. Based on these suggestions, and on input from SKI*HI staff and other professionals and parents, this resource manual was developed.

This manual contains resources for the parent advisor who is working in family-centered home-based programs for young hearing impaired children. This manual is not a sequential step-by-step home program, but rather resources that can be used as appropriate by the parent advisor in partnership with the parents. Resources in this manual are in the following main areas: (a) Background Information for the Parent Advisor; (b) Collaborative Information Gathering, Sharing, and Use; (c) Getting the Home Program Started and Providing Psycho-Emotional Support; (d) Hearing Aid Management; (e) Communication Programming including Developing Early Communication Interactions and Selecting an Appropriate Communication Methodology; (f) Auditory Programming, and (g) Language Programming. A separate volume contains the visuals, activity sheets, and handouts that accompany these home programming resources. This volume is called "Graphics To Accompany The SKI*HI Resource Manual."

The seven main areas of this resource manual are overviewed below. Each area includes important resources that will enable parent advisors to work collaboratively and effectively with families.

Area 1: Information for the Parent Advisor

This section describes five main domains of the parent advisor working in a family-centered home-based program. These five domains are:

I. Description of SKI*HI Family-Centered Home-Based Services for Infants, Toddlers, and Preschool-Aged Children with Hearing Impairment

II. A Discussion on Infants, Toddlers, and Preschool-Aged Children with Hearing Impairment

III. A Description of Some Family Characteristics

IV. A Discussion of the Roles of a Parent Advisor

V. Information For and About Parent Advisors

The first section gives a comprehensive description of SKI*HI family-centered home-based services. This section enables the parent advisor to understand the complete service delivery system.

The next section describes infants, toddlers, and preschool-aged children with hearing loss. This section focuses on demographic data on over 4,000 children with hearing impairment that have participated in SKI*HI Programs throughout the United States. This section gives the parent advisor perspective on the characteristics of these children.

The next section discusses the family of a child with a hearing loss. This section describes family systems, structure, and dynamics. It also discusses the impact of a child with a hearing loss on the family.

The fourth section, a discussion of the parent advisor's role, provides guidelines and information to assist parent advisors in performing their work. The four main roles of the parent advisor are: (a) understanding the child and determining child needs, (b) understanding the family and determining family needs, (c) conducting effective home visits, and (d) providing the family support and encouragement.

The last section contains information about the characteristics of an effective parent advisor and suggestions for the parent advisor in the areas of taking care of self, working with parents who are adult learners, listening and communicating, and problem solving.

Detailed discussions of these and other related topics are in the handbook "Home-Based Programming For Families of Handicapped Infants and Young Children."

Area 2: Collaborative Information Gathering, Sharing, and Use

A key philosophy of SKI*HI and of early intervention as prescribed by the Individuals with Disabilities Education Act (IDEA) is that families are included as team players and that the parent advisor's role is to jointly plan and conduct programming with families and to

support them in meeting their child's educational needs. In order to jointly plan and conduct appropriate programming, the child's abilities and needs must be identified (federal law requires a statement of the child's level of development in the areas of cognition, speech/language, psychosocial, motor, and self-help), and family priorities and concerns must be determined. Information on the family and child can be obtained from informal means including observation and discussion and from formal diagnostic assessments. This section of the SKI*HI Resource Manual discusses in detail the processes and procedures used to obtain information about the child and family collaboratively with the family. This section describes how this information can be used in the formulation of goals and objectives for the Individualized Family Service Plan (IFSP) or the Individualized Education Program (IEP). It also discusses how information can be gathered in a sensitive, respectful, and interactional manner with the family.

Area 3: Getting Started and Providing Psycho-Emotional Support to Families

This section contains resource information in two areas. The first area contains information that enables the parent advisor to establish rapport with the family and sensitively and effectively make the first home visits. Parents are helped to feel comfortable and involved in the parent-professional partnership from the very beginning, are helped to begin the process of understanding and appreciating deafness, and if appropriate are helped to become ready to receive topical information.

The second area of this section contains information that enables parent advisors to discuss the psycho-emotional concerns of families with them and to provide appropriate psycho-emotional support. The following topics are available to present to families:

Topic 1: Hearing Loss and Its Impact on the Family
Topic 2: The Grieving Process
Topic 3: The Sibling Experience

Additional information on providing psycho-emotional support to families is in the handbook "Home-Based Programming For Families of Handicapped Infants and Young Children."

Area 4: Home Hearing Aid Programming

This resource section enables families to understand the child's hearing loss and to understand and manage the child's hearing aids. There are eight topics and five appendixes in this section.

Topic 1: Importance of Sound
Topic 2: Understanding Speech
Topic 3: The Ear and Its Care
Topic 4: Causes of Hearing Loss
Topic 5: Hearing Tests: Preparation for Hearing Aid Fitting

Topic 6: Parts and Functions of Hearing Aids; Putting on the Aids; Selecting the Best Aids
Topic 7: Daily Listening Check; Downs Approach if Necessary
Topic 8: Care of Your Child's Hearing Aids; Troubleshooting for Feedback Source

Appendix A: Consumer Information; Hearing Aid Insurance
Appendix B: Radio-Frequency-Modulated Systems (FM Systems)
Appendix C: A Guide to Special Earmolds and Tubing
Appendix D: Parent-Infant Programming and Audiologists
Appendix E: An Introduction to the Cochlear Implant (John Tracy Clinic)

Area 5: Communication Programming

This resource section enables the child and family to develop ways of interacting that will make the child's language learning possible. It lays the foundation for all future language learning and growth by the child.

There are two basic sections in the Communication Program: (1) a section containing communication topics pertaining to the development of early effective interaction between parent and child; and (2) a section containing information and suggestions to help families explore communication methodologies and select an appropriate methodology for the child and family. The Communication Interaction Topics include the following:

Topic 1: The Importance of Early Communication
Topic 2: How Babies Learn to Communicate
Topic 3: Identifying Child's Early Communication
Topic 4: Responding to Child's Early Communication
Topic 5: Using Interactive Turn-Taking
Topic 6: Responding Appropriately to Child's Cry
Topic 7: Encouraging Smiling and Laughing in Early Interactions
Topic 8: Giving Your Child Choices
Topic 9: Importance of Daily Routines for Communication
Topic 10: Minimizing Distracting Noises
Topic 11: Getting Close To Child and On the Child's Level
Topic 12: Establishing Eye Contact and Directing Conversation to Child
Topic 13: Providing a Safe, Stimulating Communication Environment
Topic 14: Communicating Frequently With Child Each Day
Topic 15: How Parents Communicate to Babies and Young Children
Topic 16: Increasing the "Back and Forth" Exchanges in Turn-Taking
Topic 17: Encouraging Vocalizing in Communicative Interactions
Topic 18: Using Touch and Gestures in Communicative Interactions
Topic 19: Using Facial Expressions and Intonation in Communication Interactions
Topic 20: Interacting With Child About Meaningful Here-and-Now Experiences; Making an Experience Book

The section on Communication Methodology includes the following topics:

Topic 1: Issues Related to Communication Methodology Choices
Topic 2: Making Communication Methodology Choices

Topic 3: Introduction to American Sign Language and Deaf Culture: Focus on American Sign Language (ASL)
Topic 4: Introduction to American Sign Language and Deaf Culture: Focus on Deaf Culture
Topic 5: Introduction to Total Communication Using Manually Coded English
Topic 6: Introduction to Aural-Oralism
Topic 7: Introduction to Cued Speech

Area 6: Auditory Programming

This resource section addresses the need to teach the child how to use his or her residual hearing so that the child can derive meaning from sounds in the environment, from his or her own vocalizations, and from the vocalizations of others.

This section contains 20 topics that include the following:

Topic 1: Attending to Environmental Sounds and Voice
Topic 2: Attending to Distinct Speech Sounds
Topic 3: Use of Auditory Clues, Showing Source of Sound, and Reinforcement
Topic 4: Identification of Responses to Sound
Topic 5: Opportunities for and Reinforcement of all Child Vocalizations and Activity Sounds
Topic 6: Recognition of Objects and Events From Sound Source
Topic 7: Sound as First Source of Information
Topic 8: Locating Sound Source in Space
Topic 9: Reinforcement of Attempts to Locate
Topic 10: Vocalization Varied in Duration, Intensity, and Pitch
Topic 11: Tonally Expressive Speech
Topic 12: Speech Breathing
Topic 13: Locating Sound Source at Increased Distance and Different Levels
Topic 14: Reinforcement of Child's Speech Attempts and Stimulation for Vowels and Consonants
Topic 15: Stimulation with Meaningful Words
Topic 16: Discrimination and Comprehension of Environmental Sounds
Topic 17: Discrimination and Comprehension of Vocalizations that Imitate Sounds
Topic 18: Discrimination and Comprehension of Words and Phrases
Topic 19: Discrimination and Comprehension of Fine Speech Sounds--Vowels
Topic 20: Discrimination and Comprehension of Fine Speech Sounds--Consonants

The supplemental auditory activities section that accompanies the topics contains activities that are practical and home-oriented and will enable parents and parent advisor to stimulate natural auditory development in the child.

Area 7: Language Programming

There are four basic language program options in the SKI*HI Model: American Sign Language (ASL), Total Communication Using Manually Coded English, Cued Speech, and Aural-Oralism. The Aural-Oral and Total Communication Language Programs are in this

manual. The Cued Speech Program consists of a manual and training tapes and is available from HOPE, Inc., (809 North 800 East, Logan, UT 84321, (801) 752-9533). The SKI*HI Institute has not completed the development of a full-fledged ASL home program. While this is being done, there is a section entitled "Suggestions For Families Who Desire To Use ASL" on page 695.

The Aural-Oral Language Program assists families in enhancing skills that will create a natural, stimulating home environment and that will encourage language growth in their child through interactions and conversations. There are ten topics in this program:

Topic 1: Conversation: The Language-Learning Environment
Topic 2: Conversation: Turn-Taking with Conversation
Topic 3: Making Conversations Meaningful and Interesting for Your Child
Topic 4: Conversing At Your Child's Language Level
Topic 5: Taking Advantage of Daily Interactions and Experiences
Topic 6: Principles of Language Reinforcement
Topic 7: Modeling and Expanding Language
Topic 8: Helping Language Grow: Building Vocabulary
Topic 9: Helping Language Grow: Questions and Directions
Topic 10: Helping Language Grow: More Advanced Language Concepts

The Total Communication Language Program enables family members to communicate with the child in comfortable, meaningful ways using Manually Coded English. Family members learn how to sign Manually Coded English and how to use it effectively and enjoyably throughout each day. There are 15 topics in this program:

Topic 1: Basic Skills of Total Communication
Topic 2: Receptive and Expressive Language Development and the Use of Conversations
Topic 3: Development of Signing Skills: Gestures, Baby Signs, True Signs
Topic 4: Using Conversational Turn-Taking in Total Communication
Topic 5: Helping Language Grow: Selecting and Using Important, Meaningful Vocabulary
Topic 6: Communicating About What is Important
Topic 7: Conversing at Your Child's Language Level
Topic 8: Reinforcing Child's Expressive Language Attempts
Topic 9: Using Expansions in Total Communication
Topic 10: Being an Active Communicator: Using Questions, Directions, and Comments
Topic 11: Using Total Communication Consistently in Daily Activities and Experiences
Topic 12: Using Total Communication Consistently in the Home: Signing the Home Visit
Topic 13: Using Total Communication Consistently in the Home: Signing Background Conversation
Topic 14: Using Effective Total Communication
Topic 15: Helping Total Communication Grow: Advanced Language-Learning

USE OF THE SKI*HI RESOURCE MANUAL

In order to determine how to use the resources in this manual, a trusting, open, two-way partnership needs to be developed between the parent advisor and parents. The parents and parent advisor together discuss priorities, concerns, and needs and how best to address these concerns and needs with available resources. This process is discussed more specifically in the section "Collaborative Information Gathering, Sharing, and Use: Understanding the Young Child with Hearing Impairment and the Family." This resource manual is basic to the process of addressing family concerns and priorities and meeting the individual needs of the child.

This new SKI*HI Resource Manual and accompanying volume of graphics should be used in conjunction with another important resource. The resource is a handbook containing background information for the parent advisor called "Home-Based Programming for Families of Handicapped Infants and Young Children." This resource gives the parent advisor valuable information about working in home settings, understanding and working with parents and families, and characteristics and roles involved in being an effective parent advisor. Suggestions for working effectively with parents who are adult learners, using effective listening and communication, problem solving, and many other aspects of parent advising are also included. This resource provides the parent advisor with background information that enables him or her to feel comfortable and effective in his or her role as a parent advisor and in using the resources that are in this manual. This resource can be obtained from HOPE, Inc., 809 North 800 East, Logan, UT 84321, (801) 752-9533.

The SKI*HI Resource Manual is organized for convenient use by the parent advisor. The various sections of this resource manual can be located by using the colored tabs. The introduction to the manual has a red tab. The Information for Parent Advisors section has a blue tab. The Information Gathering, Sharing, and Use section has a green tab. The parent advisor will want to become familiar with these sections before initiating his or her home visits. The remaining sections are resources that can be used to conduct the home visits. All of these sections have purple tabs. These sections include Getting Started and Providing Psycho-Emotional Support, Hearing Aid Program resources, Communication Program resources (which includes the two sub-sections of Communication Interaction and Communication Methodology), Auditory Program resources, and the Language Program resources of Aural-Oral Language programming, Total Communication programming, and suggestions for families who desire to use ASL. Cued Speech program resources, which consist of training tapes and an accompanying manual, are available from HOPE, Inc.

Each home visit resource section in this manual includes an introduction, an overview, and information on how to use the topics in the program. The topics are presented next. Each topic first presents a general parent goal. The goal enables the parent advisor to know how that topic can, in general, meet parent-identified concerns and needs. Next, suggested

materials are listed that can be used to present the topical information. The most commonly referred to materials are handouts and activity sheets that need to be copied prior to the home visit for use during the visit. These handouts and activity sheets are in the volume "Graphics To Accompany The SKI*HI Resource Manual." This volume also contains the visuals that are used in the topics to illustrate concepts and ideas. When a visual is referred to in a topic, it is clearly identified so that it can be easily located in the volume of graphics (for example, see Hearing Aid Topic 1 Visual 2). The parent advisor may also want to copy the visuals for the family.

Each topic next includes information/instructions to the parent advisor if appropriate. Then the Sample Discussion is presented. The Sample Discussion should not be read to the family. Rather, the parent advisor should become completely familiar with the discussion content prior to the visit and then discuss it with the family. Next, Sample Activities are given that will help family members enjoyably learn the concepts and skills in the Sample Discussion. This is followed by a listing of suggested Sample Challenges. These challenges should not be extra work imposed on family members ("You need to do this"). Rather, the parent advisor and family together can discuss how family members can do what they are already doing and incorporate the skills into those activities and routines. Challenges should be what the family members want to do with the skill during the upcoming week, not what the parent advisor wants the family to do. Finally, a Reference and Reading List is presented in each topic. Some topics also include Supplemental Information and/or Appendixes.

The parent advisor will want to review the information on pages 33 to 35 which describes how to conduct home visits effectively with families in home settings.

The SKI*HI Model

A Resource Manual for Family-Centered, Home-Based Programming for Infants, Toddlers, and Preschool-Aged Children with Hearing Impairment

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SKI*HI Resource Manual: Family-Centered, Home-Based Programming for Infants, Toddlers, and Preschool-Aged Children with Hearing Impairment

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Graphics To Accompany The SKI*HI Resource Manual

HOPE, Inc.
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Logan, Utah 84321

Graphics To Accompany The SKI*HI Resource Manual

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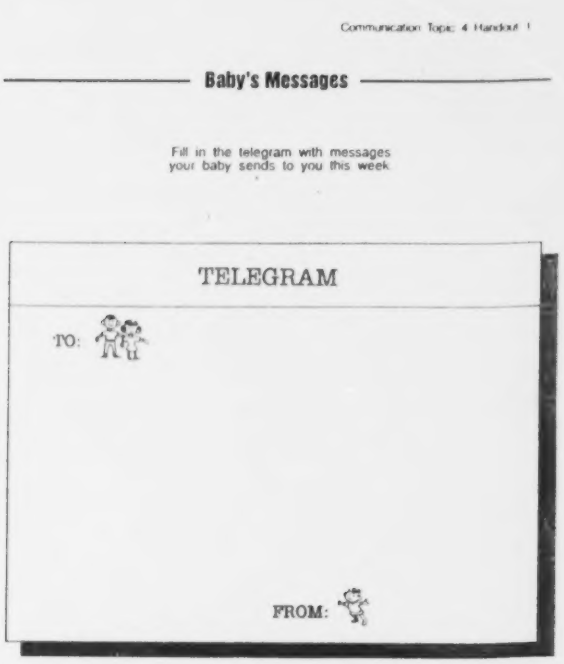
Visuals, activity sheets, and handouts can be used to assist family members to learn skills and concepts that will be meaningful and useful for them. The visuals can be shown to the family as part of the topic discussion to illustrate specific concepts and skills. The parent advisor may wish to put the visuals in plastic covers, especially if they are used very frequently or if they need to be marked on. The parent advisor may want to refer to the visuals during the discussion by putting the binder in his or her lap or by propping the binder up against something nearby and then displaying the appropriate visual. Activity sheets can be used as part of the home visit activities and handouts can be left with family members to refer to or to record information on during the week. Copies of activities sheets and handouts should be made prior to the home visit so that they can be used during the home visit and/or left with the family. The parent advisor may also want to copy the visuals for the family.

All visuals, activity sheets, and handouts are clearly referred to in the topics (for example, "see Hearing Aid Topic 1 Visual 2" or "conduct the activity using Auditory Topic 10 Activity Sheet"). All graphics are clearly labeled in the upper right-hand corner.



Additional sets of graphics (with or without binders) can be obtained from HOPE, Inc., 809 North 800 East, Logan, Utah 84321.

Use of the Graphics

The graphics contained herein are for the following SKI*HI program resources:

1. Hearing Aid Program Resources
2. Communication Program Resources: Communication Interaction
3. Communication Program Resources: Communication Methodology
4. Auditory Program Resources
5. Language Program Resources: Aural-Oral Language
6. Language Program Resources: Total Communication

Each of these sections can be located in this manual by a tab that corresponds with the tab of the same color in the SKI*HI Resource Manual.

There are three kinds of graphics in this manual:

1. Visuals: Visuals pictorially illustrate concepts discussed in the various home program resource topics.
2. Activity Sheets: Activity sheets are used in paper and pencil activities that are conducted during the home visit, or they can be left with family members for them to conduct the activity during the week.
3. Handouts: Handouts are left in the home with family members to reinforce concepts discussed in the topics and/or on which they can record information.

SKI-HI BASIC TRAINING AGENDA
HOME STUDY FORMAT
WORKSHOP #1

DAY ONE (Full Day)	
45 min. - 1 hr.	Registration, Welcome, Get Acquainted, Go Over Objectives for Training and Agenda
45 min.	Overview/Rationale of SKI-HI Programming and Resource Manual Basics in Family-Centered Programming with SKI-HI
15 min.	Break
1 hr. 15 min.	The Parent Advisor and the Family: Partners Getting Started with Home Visits Psycho-Emotional Support Topics
1 hr.	Lunch Break
30 min.	Introduction to Hearing Aid Program
1 hr.	Hearing Aid Practicum
15 min.	Break
1 hr. 30 min.	Communication Program Overview Communication Interaction Section Communication Methodology Section
DAY TWO (Half Day)	
15 min.	Warm-up
1 hr.	Auditory Program
5 min.	Language Program Overview
20 min.	Aural-Oral Language Program
15 min.	Break
35 min.	Total Communication Program
45 min.	Group Activity on Language Program
25 min.	Information Gathering, Sharing, and Use Language Development Scale
45 min.	Summary, Wrap-up, Workshop Evaluations, Dismiss

SKI-HI BASIC TRAINING AGENDA
HOME STUDY FORMAT
WORKSHOP #2

DAY ONE (Full Day)	
30 min.	Welcome! Let's Get Re-Acquainted
30 min.	Participants' Sharing of Home Visit Experiences
15 min.	Workshop Objectives and Agenda
1 hr. 45 min.	Psycho-Emotional Support for Families: Video and Discussion (with 15-minute break)
30 min.	Application of SKI-HI in Partnership with Families: Introduction
1 hr.	Lunch
2 hrs. 15 min.	Application of SKI-HI in Partnership with Families, Part I: Walk-through (with 15-minute break) *Whole group will walk through a situation using:* ·Description of a Family and Child ·SKI-HI Information Gathering System ·SKI-HI Data Sheet ·Individualized Family Service Plan (IFSP) ·Short-Term Objectives ·Lesson Plan
45 min.	Review of Course Questions/Concerns/Implementation Wrap-up, Evaluations of Course
DAY TWO (Half Day)	
15 min.	Final instructions and questions; divide into groups
2 hrs.	Application of SKI-HI in Partnership with Families, Part II: Final Exercise Participants in groups of 4 to 6 will carry out all steps covered in Part I Walk-Through and complete all forms using a new description of a family and child
15 min.	Break
1 hr.	Each group will report results of exercise to whole group. Participants will discuss. Instructor will collect completed forms. Final Summary; Dismiss

SKI-HI BASIC TRAINING
SIX-DAY ON-SITE WORKSHOP AGENDA

Day One

8:15 a.m.	Registration
8:30 a.m.	Welcome - Let's Get Acquainted! Workshop Objectives, Agenda Discussion of Between-Workshop Assignment
9:15 a.m.	Rationale and Overview of SKI-HI Early Identification of Hearing Loss Management of an Early Family-Centered Program Basics in SKI-HI Family-Centered Programming
10:15 a.m.	Break
10:30 a.m.	The Parent Advisor and the Family: Creating a Partnership The Effective Parent Advisor Planning and Delivery of Home Visits
11:45 a.m.	Lunch
1:00 p.m.	Gathering Information Family-Focused Interview SKI-HI Language Development Scale
2:30 p.m.	Break
2:45 p.m.	Getting Started and Psycho-Emotional Support Topic 1 - Hearing Loss and Its Impact on the Family Topic 2 - The Grieving Process Topic 3 - Sibling Experience
4:00 p.m.	Dismiss

Day Two

8:30 a.m.	Good Morning! Review of Preceding Day
8:45 a.m.	SKI-HI Hearing Aid Program Introduction, Rationale, Goals and Components Hearing Aid Visuals
9:15 a.m.	Hearing Aid Topics Topic 1 - Sound Topic 2 - Perception of Sound Topic 3 - The Ear and Its Care Topic 4 - Causes of Hearing Loss

Day Two - *Continued*	
10:00 a.m.	Break
10:15 a.m.	Hearing Aid Topics - Continued Topic 5 - Hearing Tests and Preparation for Fitting Topic 6 - Parts and Functions of Hearing Aids Topic 7 - Daily Listening Check Topic 8 - Care and Trouble Shooting of Hearing Aids
11:45 a.m.	Lunch
1:00 p.m.	Practicum on Hearing Aid Topics
2:15 p.m.	Break
2:30 p.m.	Hearing Aid Forms and Data Collection - Practicum
3:30 p.m.	SKI-HI Communication Program Introduction, Rationale, Goals and Components
4:00 p.m.	Dismiss

Day Three	
8:30 a.m.	Good Morning! Review and Business
8:45 a.m.	Communication Interaction Topics Introduction Identifying and Responding to Child's Early Use of Signals (9 topics) Optimizing Daily Communication in the Home (5 topics)
10:00 a.m.	Break
10:15 a.m.	Optimizing How Parents Communicate with Child (6 topics)
11:00 a.m.	Communication Methodology Topics Topics 1 & 2 - Issues Related to Making Communication Methodology Choices
11:45 a.m.	Lunch
1:00 p.m.	Communication Methodology Topics - Continued Topics 3 to 7 - Introducing Parents to the Methodologies
2:00 p.m.	Break
2:15 p.m.	Communication Forms, Assessment, and Data Collection - Practicum
3:00 p.m.	Summary, Evaluation, Between-Workshop Assignment, and Plans for Second Workshop
4:00 p.m.	Dismiss

Day Four	
8:15 a.m.	Registration, Welcome; Let's Get Re-acquainted!
8:45 a.m.	Participants' Sharing of Home Visit Experiences; Discussion of Assignments
9:30 a.m.	Workshop Objectives and Agenda
9:45 a.m.	SKI-HI Auditory Program Introduction, Rationale, Goals and Components
10:15 a.m.	Break
10:30 a.m.	Auditory Phase I Attending Use of Auditory Clues, Sound Source and Reinforcement Identification of Responses to Sounds Early Vocalizations Stimulation and Reinforcement of Child Sounds
11:45 a.m.	Lunch
1:00 p.m.	Auditory Phase II Recognition of Objects and Events from Sound Source Locating Sound Source in Space Vocalizing with Inflection
1:45 p.m.	Auditory Phase III Locating Sound at Increased Distance and Different Levels Stimulation and Reinforcement for Producing Vowels and Consonants
2:30 p.m.	Break
2:45 p.m.	Auditory Phase IV Discrimination and Comprehension of: Environmental Sounds Vocal Sounds Words and Phrases Speech Sounds Speech Use
3:30 p.m.	Auditory Forms and Data Collection - Practicum
4:00 p.m.	Dismiss

Day Five	
8:30 a.m.	Good Morning! Review and Business
8:45 a.m.	SKI-HI Language Program Introduction, Rationale, Goals, Components
9:15 a.m.	Aural-Oral Language Program Topics Conversation (4 topics)
10:00 a.m.	Break
10:15 a.m.	Aural-Oral Language Topics-Continued Taking Advantage of Daily Interactions Principles of Language Reinforcement Modeling and Expanding Language Helping Language Grow (3 topics)
11:45 a.m.	Lunch
1:00 p.m.	Total Communication Program Topics Basic Skills Language Development and Conversation Child's Development of Signing Skills Conversational Turn-Taking Helping Language Grow Communicating About What is Important Conversing at Child's Language Level Reinforcing Child's Language Attempts Using Expansions
2:15 p.m.	Break
2:30 p.m.	Total Communication Program Topics - Continued Being an Active Communicator Using Total Communication Consistently (3 topics) Using Effective Total Communication Helping Total Communication Grow
3:15 p.m.	American Sign Language Resources (An ASL Program is currently being researched and developed to be incorporated into SKI-HI)
3:30 p.m.	Language Program Forms and Data Collection - Practicum
4:00 p.m.	Application of SKI-HI in Partnership with Families: Introduction
4:30 p.m.	Dismiss

Day Six	
8:30 a.m.	Good Morning! Review and Business
8:45 a.m.	Application of SKI-HI in Partnership with Families: Part I (with 15-minute break) Whole group walk through a situation using: Description of a Family and Child SKI-HI Information Gathering System SKI-HI Data Sheet Individualized Family Service Plan Short-Term Objectives Lesson Plan
11:00 a.m.	Review/Questions/Concerns/Implementation Wrap-up, Evaluations of Course
11:45 a.m.	Lunch
1:00 p.m.	Application of SKI-HI in Partnership with Families: Part II As a Final exercise: Participants in groups of 4-6 carry out all steps covered in morning walk-through and complete all forms using a new description of a different family and child.
3:00 p.m.	Break
3:15 p.m.	Groups report results of exercise to whole group. Participants discuss. Instructor collects completed forms from each group.
4:15 p.m.	Final Summary Dismiss

...SKIHI\TRAINING\FORMS\SIX-DAY.AGD

APPENDIX E

SKI-HI Training Format Overview

SKI-HI TRAINING

For Professionals Being Trained in the SKI-HI Model of Family-Centered

Home-Based Programming for Families with Infants

Who are Deaf or Hard of Hearing

Presented by the SKI-HI Institute
Utah State University
809 North 800 East
Logan, Utah 84322-1900
(801) 752-4601 Voice or (801) 755-0317 TTY/FAX

SKI-HI Basic Training prepares professionals to be parent advisors helping families acquire information, skills, and support in facilitating the development of their young children who are deaf or hard of hearing. It includes a comprehensive overview of the rationale and organization of the SKI-HI Model, including early identification, administration, and supportive service components.

The majority of the workshop time is devoted to training in the direct services to families. Participants discuss application of the principles of early home programming. They become familiar with the SKI-HI resources, which are shared with the family and include early communication, audition, hearing aid management, communication methodology choices, auditory/prespeech development, and language development.

The training is presented by a certified SKI-HI trainer who combines multi-media presentations, large and small group discussions, role-playing, problem-solving, and hands-on experiences. The training is designed for the service delivery professional who will be making weekly visits to the families.

The SKI-HI training consists of a choice between two training formats, the on-site format consisting of two three-day workshops with one assignment in between, and the home-study format consisting of two shorter workshops and eight home-study assignments. When the training is presented by a nationally certified trainer, participants can register for credit from Utah State University on the quarter system: 3 credits (equating to 2 semester credits) for the onsite format and 4 credits (2.66 semester credits) for the home-study format.

The cost of training includes the training fee, travel and per diem for the trainer, and curriculum materials for every parent advisor. The SKI-HI Institute shares costs with the agency and helps the agency determine funding sources within the local area. Some of these may be the agency itself, the NDN State Facilitator, other state agencies, and local agencies. Currently the total training fee is about $5000. A set of materials for a parent advisor costs about $100.

SKI-HI service to a state or agency can include pre- and post-training consultation on implementation and management of the Model. If a state desires the establishment of a state training system, parent advisors are eligible to become certified local trainers after delivering SKI-HI services to families for one year.

The desired outcome of SKI-HI training is to enable the families of young children who are deaf or hard of hearing to receive high-quality service as early and effectively as possible.

WORKSHOP GOALS AND CONTENT

The goal of SKI-HI training is to prepare professionals to deliver effectively the resources of the *SKI-HI Family-Centered Home-Based Program* including the following:

1. An understanding of the rationale for early home intervention and of the whole array of services which make up this complete and effective early intervention program.
2. A thorough knowledge of the SKI-HI Resource Manual, including the principles, procedures, content, sequencing, program assessment and reporting.
3. An ability to work in partnership with parents and other family members in the home setting, to convey information, to model skills, to assess child progress, to provide support, and be part of the parent-professional team.

On-Site Format
WORKSHOP #1 (3 days)

Overview and Rationale of SKI-HI Model Basics in Family-Centered Programming

The Parent Advisor and the Family
- * Partners
- * Getting Started--Home Visits

Hearing Aid Program
- * Selecting, fitting and managing aids
- * Helping parents understand hearing, hearing loss, testing, and amplification
- * Helping parents acquire skills with hearing aids and ensuring consistent wearing of aids
- * Practicum

Assessment and Evaluation
- * Data

Psychoemotional Support
Communication Assessment
Communication Program
- * Interaction
  - - Identifying and responding to child's early use of signals
  - - Optimizing daily communication
  - - Optimizing parent's communication interaction

Helping Parents Select an Appropriate Communication Methodology
- * ASL and Deaf Culture
- * Manually Coded English
- * Aural-Oralism
- * Cued Speech

Plan for Workshop #2
- * Between workshop assignment

WORKSHOP #2 (3 days)

Questions, Concerns, Review
Auditory Program
- * Helping parents learn how to foster auditory development
- * Helping parents develop speech stimulation skills

Language Program
- * Parent skills in stimulation of language growth in natural situations
- * Interactive, conversational approach
- * Aural-Oral Language Program
- * Total Communication Program
- * ASL Resources

Information Gathering, Sharing and Use
Language Development Scale
Application and Implementation of the Model

Home-Study Format
WORKSHOP #1 (12 hours)

Pre-workshop Assignment--Family-Centered Programming

Overview & Rationale of SKI-HI Model Basics in Family-Centered Programming

The Parent Advisor and the Family
- * Partners
- * Getting Started--Home Visits

Psychoemotional Support
Hearing Aid Program
- * Hearing Aid Practicum

Communication Program
- * Interaction
- * Methodology

Auditory Program
Language Program
- * Aural-Oral Language Program
- * Total Communication Program
- * Language Activity
- * ASL Resources

Information Gathering, Sharing and Use
Language Development Scale
Plan for Workshop #2

Home-Study Assignments
- * Role of the Parent Advisor
- * Hearing Aid Program
- * Communication Interaction
- * Communication Methodologies
- * Auditory Program
- * Aural-Oral Language Program
- * Total Communication Program

WORKSHOP #2 (12 hours)

Questions, Concerns, Review
Case Study and Practicum Discussion on:
- * Data
- * Family Resources, Concerns, Priorities
- * IFSP
- * Short-Term Objectives
- * Lesson Plan

Psychoemotional Support
- * Mourning process

Program Implementation

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APPENDIX F

SKI-HI National Data Report: 1992-93

SKI*HI 1992-1993 NATIONAL DATA REPORT

SKI*HI Institute
Department of Communicative Disorders
Utah State University
Logan, Utah 84322-1900

April, 1994

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Many people contributed to this annual SKI*HI data report and we wish to thank them. First of all, our sincere appreciation to Don Barringer, and other Institute staff members for their wholehearted support. Next, our sincere thanks to the SKI*HI trainers for training new site personnel in data collection. Finally, and perhaps most importantly, we extend our most sincere appreciation to the children, parents, parent advisors, and administrators who participated in SKI*HI programming and data reporting.

INTRODUCTION

The SKI*HI Program provides identification, hearing aid management, communication, auditory, and language facilitation through home management for children with hearing losses, from birth to age five, and their families. This report contains data on children with hearing losses receiving SKI*HI parent-infant programming services. Demographic characteristics, hearing loss, and recent measurements of language development of the children with hearing losses in the program are reported.

The data in this report were submitted to the SKI*HI Institute by the SKI*HI replication agencies which serve the children. This report includes demographic data on 348 children and representative language development data on 240 children served by 11 different sites in 3 states. Statistical analyses of language development of children are based on the children who have test data collected in 1992 and 1993. This number is less than the total registered in the demographic section for several reasons. First, some children who joined the program quite recently have not been tested more than once. Second, some children were not tested in 1992 or 1993 even though they are still in the program. Third, not all sites participating in the program submit their data to the SKI*HI Institute. This year only those sites which financially supported the data collection and analysis are included.

1.0 DEMOGRAPHIC INFORMATION

The demographic data contains information on the following items:

1. Sex, other disabilities, race, and language spoken in the home
2. Type and cause of hearing loss
3. Audiological results
4. Age of identification and hearing aid fitting
5. Communication method, home visit frequency, and other services

Table 1 (on pages 5 to 7) summarizes the demographic information of the SKI*HI children served by the participating sites for the 1992-1993 year. The following is a discussion of that information.

1.1 SEX, OTHER DISABILITIES, RACE, AND LANGUAGE SPOKEN IN HOME

Table 1 shows that more than half of all SKI*HI children are male. About one quarter (28%) of all SKI*HI children have disabilities in addition to their hearing loss. Fifty-one percent (51%) of all SKI*HI children are white, another 13% are Black, 15% Native American, and 20% Spanish American. The remaining 2% include other ethnic origins. The primary language spoken in the homes of SKI*HI children is English (84%).

1.2 TYPE AND CAUSE OF HEARING LOSS

Table 1 reveals that the most common type of hearing loss is sensorineural. Sixty-six percent (66%) of all SKI*HI children have this type of loss. Mixed loss is 6% and conductive loss is 28%.

The causes of hearing loss are diversified. Unknown (43%), middle ear problems (21%), hereditary (8%) and meningitis (6%) represent the majority of causes. These causes are followed by birth defects (4%).

1.3 AUDIOLOGICAL RESULTS

In Table 1, audiological results are reported for the child's best ear. Eligibility for program services depends on the need for amplification, not on a minimum decibel loss. The overall mean hearing loss for this year's children is 66.0 Db without amplification. With amplification, it is 46.2 Db.

1.4 AGE OF IDENTIFICATION AND HEARING AID FITTING

Table 1 shows that the average SKI*HI child is identified at 15.5 months. Many of the children (43%) are identified before they are 12 months old.

Table 1 also shows that the average SKI*HI child has amplification fitted at 18.4 months of age. Most of the children (77%) have their hearing aids fitted by 24 months of age.

There is an average 2.5 months of time between suspicion of the loss and identification.

1.5 COMMUNICATION METHOD, HOME VISIT FREQUENCY, AND OTHER SERVICES

When children and families first enter the program, the communication methodology is diagnostic and prescriptive. Twenty-one percent (21%) of SKI*HI children are currently

in this diagnostic phase. Subsequently, most children begin an aural-oral or Total Communication system. Total Communication is currently used by 38% of SKI*HI children and an aural-oral approach is used by 40% of the children. A majority of the children (64%) are visited once a week by SKI*HI home visitors. Educational support (29%) remains the most common additional service provided for the children.

2.0 SUMMARY OF DEMOGRAPHIC CHARACTERISTICS: DESCRIPTION OF THE TYPICAL CHILD

Based on the data in Table 1, the typical child served by the SKI*HI program during this year is a male with a hearing loss of 66.0 dB who lives with his English-speaking family. His sensorineural hearing loss from unknown causes was identified when he was about 15.5 months old. Parents or medical personnel suspected his hearing loss when he was about 13 months old. About 2.5 months elapsed before his disability was confirmed. At about 18 months, he had his hearing aid fitted and when he wears it, his hearing loss is about 44.2 dB. There is a 28% chance that he has another disabling condition. The SKI*HI parent advisor visits his home once a week. If he receives any other special service, it is likely to be an educational one. Let's call him Kevin. Kevin is the typical child in the SKI*HI population for the year 1992-1993.

Table 1
BASIC DEMOGRAPHICS OF SKI*HI CHILDREN
1992-93

Demographic Characteristics	Valid Cases	Frequency	Percentage
Sex:	330		
Male		181	55
Female		149	45
With Other Disabilities:	321		
Yes		90	28
No		230	72
Race:	322		
Caucasian		165	51
Black		41	13
Spanish American		63	20
Native American		47	15
Other		6	2
Primary Language:	331		
English		279	84
Spanish		20	6
American Sign Language		3	1
Signed English System		7	2
Other		18	7
Type of Hearing Loss:	316		
Sensorineural		210	66
Mixed		18	6
Conductive		88	28
Cause of Hearing Loss:	348		
Unknown		149	43
Hereditary: congenital, child syndromes		28	8
Rubella, CMV, infection		10	3
Meningitis		22	6
Defects at birth		14	4
Fever or Infection		2	1
Drugs during pregnancy		1	< 1
Conditions during pregnancy		9	3
Middle ear problems		73	21
Drugs administered		5	1
Birth trauma		2	1
Child syndrome		8	2
Other		2	1
Not reported		23	7

Table 1 (continued)

BASIC DEMOGRAPHICS OF SKI*HI CHILDREN
1992-93

	Valid Cases	Mean (dB)	Min. (dB)	Max. (dB)
Hearing Loss Unaided:	234	66.0	3	120
Hearing Loss Aided:	119	46.2	10	105

	Valid Cases	Percentage	Median
Age Identified:			
Median ID age for all SKI*HI children	291		15.5
Number identified by age:			
Birth-12 mos.	126	43	
13-24 mos.	85	29	
25-36 mos.	58	20	
37 mos. and above	22	8	
Age Fitted With Amplification:			
Average age fitted for all SKI*HI children	196		18.4
Number fitted by age:			
Birth-12 mos.	64	33	
13-24 mos.	66	34	
25-36 mos.	45	23	
37 mos. and above	21	11	
Time between suspicion and identification	232		2.5

Table 1 (continued)

BASIC DEMOGRAPHICS OF SKI*HI CHILDREN
1992-1993

	Valid Cases	Frequency	Percentage
Communication Method:	307		
Diagnostic-prescriptive		64	21
Aural-oral		124	40
Total Communication		116	38
Other methods		3	1
Home Visit:	308		
Once a week		198	64
Every other week		57	18
Other		2	1
Monthly		23	8
Irregular		28	9
Other Services:	206		
Educational		59	29
Health		6	3
Social		3	2
Mental health		1	<1
Other		89	43
Speech and Hearing		22	11
Education and Speech		26	13

Note: Percentages may not add up to 100% due to rounding error.

3.0 LANGUAGE DATA

This section discusses projecting the language age of a child, and contains a description of the Language Development Scale (LDS), the measurement of language development as done in SKI*HI programs, a discussion of proportional change indexes used in the language development evaluation, and a discussion of overall test results.

3.1 PROJECTING THE LANGUAGE AGE OF A CHILD

Before looking at the 1992-1993 language data on SKI*HI children, it is useful to discuss some considerations about how to study this data. Sheehan (1979) describes the problems of measuring progress of very young disabled children. If one assumes that over a short period of time between two test measurements a child's language grows at a constant rate, one can use the initial testing of the child to predict the child's performance in the future. If a child, Kevin, has a receptive language age of five months when 12 months old, what language age can we expect when he is six months older or 12 months older?

Two simple approaches have been suggested. The first is an additive model based on a study by the National Demographic Survey of the Deaf (Gentile, 1978). This study found that on the average, a deaf child's progress in language development is one month per year. Kevin, with a language development age of five months when one year old, would be expected to have a language age of six months when he reaches two years. A second model, a multiplicative one, can also be used. We can estimate that our one year old boy, when twice as old (that is, when two) would have twice as high a language age as when he was one. Kevin's language age would increase from five months to ten months. This is another way of saying that the ratio of the child's language age to chronological age will stay the same. The goal of the SKI*HI

Program is to have a child attain a higher level of language than predicted by either of these two approaches.

3.2 DESCRIPTION OF THE LANGUAGE DEVELOPMENT SCALE (LDS)

Analysis of change in child language in SKI*HI focuses on scores of the Language Development Scale (LDS) which Tonnelson (1980) determined to be both reliable and valid. The LDS test is administered by parents or caretakers who note the occurrence of many indicators of language understanding and language expression by the child with a hearing loss during the period of a week. Parent advisors calculate the receptive and expressive language ages of the child.

3.3 MEASUREMENT OF LANGUAGE DEVELOPMENT

Change in language development is a major aim of the SKI*HI Program. Receptive and expressive language are measured when a child first enters the program and at regular intervals thereafter. This section presents data from the initial, the Fall 1992, and the Spring 1993 testing of the same children. Based on these three tests, two pre/post comparisons are made:

1. Spring 1993 LDS test scores compared with the first test ever given to the same children. In some cases, the Fall 1992 test is the first test ever given.
2. Spring 1993 scores against Fall 1992 scores of the same children.

The first compares the most recent data with the data of the initial LDS test administered near the start of participation in the SKI*HI program. The second comparison shows progress during the most recent school year period. Since these comparisons reduce the

number of valid pairs, they should be regarded as representative samples of the total child population in the project.

In addition to the comparisons of the receptive and expressive language scores on the LDS, scores can be adjusted by the age of the child when the test was administered. The adjusted scores, which are the child's tested language age divided by the child's chronological age (in months) when tested, are Language Development Quotients for the child's receptive and expressive ability at different times.

The two pre/post analyses can be made for both LDS scores and Language Development Quotients. Table 2 (on the next page) summarizes the pre/post comparisons for children with comparable data in the data bank.

Table 2

PRE/POST TEST COMPARISONS OF LDS SCORES
AND LANGUAGE DEVELOPMENT QUOTIENTS

RECEPTIVE ABILITY

Pre/Post Test	Valid Pairs	Mean	S.D.	T-Value*
		LDS Scores in Months		
First Testing	240	16.0	13.4	19.3*
Spring, 1993		27.5	10.5	
Fall, 1992	229	20.9	11.4	16.4*
Spring, 1993		27.4	13.3	
		Development Quotients		
First Testing	224	.70	.35	3.1*
Spring, 1993		.70	.28	
Fall, 1992	215	.72	.29	4.0*
Spring, 1993		.77	.28	

EXPRESSIVE ABILITY

Pre/Post Test	Valid Pairs	Mean	S.D.	T-Value*
		LDS Scores in Months		
First Testing	240	14.4	9.9	19.4*
Spring, 1993		25.5	12.9	
Fall, 1992	229	19.3	11.2	15.3*
Spring, 1993		25.5	12.7	
		Development Quotients		
First Testing	224	.64	.41	2.7*
Spring, 1993		.71	.26	
Fall, 1992	215	.67	.31	2.8*
Spring, 1993		.71	.26	

* $p < 0.05$

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The results presented in Table 2 show statistically significant improvement in both receptive and expressive language scores and quotients. For receptive language, between their first and recent Spring 1993 testing, the same group of children increased their receptive language performance by nearly 12 months and their expressive language improved by more than 11 months over an average time span of 11.8 months (average time between the first and the last test). Since this comparison has considerable variability in the time between the administration of the tests, as well as in number of months per year of program intervention, it is useful to look at the language scores on tests that are administered at roughly equal intervals. The comparison of the Spring 1993 and Fall 1992 tests (average 6.1 months apart within a school year) shows the language scores increased by about seven months on the receptive and six months on the expressive scale. These are much larger improvements than the National Demographic Survey (Gentile, 1971) which suggests only one month's language growth per year for children with a hearing loss.

The ratio of language age to chronological age (Language Development Quotient) in Spring 1993 is about 0.77 for receptive language and about 0.71 for expressive language. When comparisons of language quotients are made between test dates, the data indicate that the ratio (or rate) of language acquisition is increasing and this increase is statistically significant. These results exceed the prediction set forth by the multiplicative model, which estimates that the ratio of a child's language age to chronological age will remain constant.

3.4 PROPORTIONAL CHANGE INDEXES

Another method used to compare language developmental rate during intervention with developmental rate measured at pretest is the Proportional Change Index (PCI), as described by Wolery (1983).

First, LDS test scores were transformed to Intervention Efficiency Indexes (IEI) (Bagnato & Neisworth, 1980) by dividing the developmental gain between the pretest and the posttest by the time between the pretest and the posttest. The IEI was then divided by the pretest developmental rate (PDR). The PDR was computed by dividing the pretest developmental age by the pretest chronological age. These transformations yielded PCIs.

$$\text{IEI/PDR} = \underline{\text{PCI}}$$

Children whose rates of development are slower during intervention than at pretest will receive a PCI of less than 1.0. In contrast, children whose rates of development accelerated during intervention will receive a PCI greater than 1.0. Ideally, one would want to see accelerated rates (i.e., greater than 1). Proportional Change Indexes of the receptive and expressive language development areas of the LDS for SKI*HI children are shown in Table 3.

Table 3

PROPORTIONAL CHANGE INDEXES
FOR PROJECT SKI*HI CHILDREN
Spring, 1993

	Expressive LDS	Receptive LDS
N	224	224
Mean PCI	2.8	2.4
Median PCI	1.6	1.5

The average SKI*HI child shows accelerated growth during SKI*HI intervention in both expressive and receptive areas of language development.

3.5 OVERALL TEST RESULTS

Overall, the results show not only statistically significant gains in both expressive and receptive language, but that these gains exceed those predicted by either an additive or a multiplicative model. These data strongly suggest that the SKI*HI program is improving both the receptive and expressive language of children with a hearing loss through home intervention.

4.0 SUMMARY OF LANGUAGE PROGRESS

Kevin, the typical child served by Project SKI*HI this year, was about 25.2 months old when his language development was first checked by the Language Development Scale. At that time, his receptive language age measured 16.0 months and his expressive language age 14.4 months. His most recent test at about 35.9 months of age showed that his receptive language improved to 27.5 months and expressive language to 25.5 months. In other words, in 10.7 months time, Kevin made nearly 12 months of receptive language progress and more than 11 months of expressive language progress.

In addition, Kevin made 6.5 months of receptive language progress and 6.2 months of expressive language progress during 6.1 months of treatment time during the school year 1992-1993. These improvements greatly exceed the expectations of the two different criteria discussed above. Kevin's language is growing faster than one month per year as suggested by the National Demographic Study (additive model). It is also growing faster than what would be expected with the multiplicative model. The rate of Kevin's language growth is increasing and the numerical size of the increase is statistically significant. These positive findings confirm the effectiveness of the SKI*HI program in improving language performance of children with a hearing loss.

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APPENDIX G

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